Everyone Counts

Lessons about collecting gender data to improve health outcomes of the transgender and non-binary population for the U.S. Census Bureau and other population-based survey instruments

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Contents

Acronyms

Note on acronyms relating to sexual orientation and gender identity

Mathematica selected the acronyms used in this report based on their common usage in a specific country in recent literature published by researchers, advocacy groups, statistical agencies, and governments. The terms used throughout reflect the country from which we gained our insights. We align acronyms with those used in the country of discussion to represent culturally specific identities, respect differences in language, and better represent the gender and sexual diversity within a given country.

i. Overall

2SLGBTQI+	Two-Spirit, lesbian, gay, bisexual, transgender, queer, intersex, plus people who identify as part of sexual and gender diverse communities, who use additional terminologies. (Canada)
ACS	American Community Survey
BRFSS	Behavioral Risk Factor Surveillance System (United States)
CDC	Centers for Disease Control and Prevention (United States)
DC	District of Columbia
HCPS	Health Care Patient Survey
INDEC	Instituto Nacional De Estadística y Censos (Argentina)
KII	key informant interview
LGBTQIA+	(English) lesbian, gay, bisexual, transgender, queer, intersex, asexual, plus other identities
LGBTTIQ+	(Spanish) lesbiana, gay, bisexual, transgénero, transexual/travesti, intersexual, queer, plus other identities
NASEM	National Academies of Science, Engineering, and Medicine
NCHS	National Center for Health Statistics
NCVS	National Crime Victimization Survey
NHIS	National Health Interview Survey
NIH	National Institutes of Health (United States)
NIS	National Inmate Survey
ONS	Office for National Statistics (United Kingdom)
PATH	Population Assessment of Tobacco and Health
RWJF	Robert Wood Johnson Foundation
SDOH	social determinants of health
SNAP	Supplemental Nutrition Assistance Program
SOGI	sexual orientation and gender identity
U.K.	United Kingdom
U.S.	United States
USTS	United States Transgender Survey
YRBSS	Youth Risk Behavior Surveillance System

ii. United States

ACS	American Community Survey
BRFSS	Behavioral Risk Factor Surveillance System
CDC	Centers for Disease Control and Prevention
DOMA	Defense of Marriage Act of 1996
HCPS	Health Center Patient Survey
LGBTQ+	lesbian, gay, bisexual, transgender, queer
NCVS	National Crime Victimization Survey
NHIS	National Health Interview Survey
NIH	National Institutes of Health
NIS	National Inmate Survey
PATH	Population Assessment of Tobacco and Health
SNAP	Supplemental Nutrition Assistance Program
SOGI	sexual orientation and gender identity
USTS	United States Transgender Survey
YRBSS	Youth Behavioral Risk Surveillance System

iii. Argentina

AboSex	Advocates for Sexual Rights (Abogad*s por los Derechos Sexuales)
Alitt	Association for the Fight for Transvestite and Transsexual Identity (Asociación de Lucha por la Identidad Travesti y Transexual)
DGEyC	General Directorate of Statistics and Censuses (Dirección General de Estadística y Censos)
FALGBT	Argentinian LGBT Federation (Federación LGBT Argentina)
INADI	Institute against Discrimination, Xenophobia and Racism (Instituto Nacional contra la Discriminación, la Xenofobia y el Racismo)
INDEC	National Institute of Statistics and Census of Argentina (Instituto Nacional de Estadística y Censos de Argentina)
IPEC	Institute for Statistics and Census (Instituto de estadisticas y censos)
LAC	Latin America and the Caribbean
LGBTTIQ+	lesbiana, gay, bisexual, transgénero, transexual, travesti, intersexual, queer
ONUSIDA	UNAIDS—Joint United Nations Program on HIV/AIDS (Organización de las Naciones Unidas SIDA)
UNSAM	National University of San Martin (Universidad Nacional de San Martín)

iv. Canada

2SLGBTQI+ This is the acronym officially used by the Government of Canada. According to Canada's Federal 2SLGBTQI+ Action Plan (Women and Gender Equality Canada 2022), the acronym was adopted to be more inclusive and its components include:
2S at the front, recognizes Two-Spirit people as the first 2SLGBTQI+ communities.
L—lesbian
G—gay
B—bisexual
T—transgender
Q—queer
I—intersex, considers sex characteristics beyond sexual orientation, gender identity, and gender expression
+ includes people who identify as part of sexual- and gender-diverse communities, who use additional terminologies

UN United Nations

v. England and Wales

APS Annual Population Survey

BSA British Social Attitudes survey

GRA Gender Recognition Act of 2004

GSS Government Statistical Service

LGBTQ+ lesbian, gay, bisexual, transgender, queer

NISRA Northern Ireland Statistics and Research Agency

NRS National Records of Scotland

ONS Office for National Statistics

TERF trans-exclusionary radical feminist

Glossary of key terms

Note on terminology

People use a wide range of terms to refer to their own identities and the terminology is constantly evolving. By contrast, statistical standardization generally requires defining concepts rigidly, using mutually exclusive categories that are fixed over time.

The following table provides a list of terms with explanations of how we use them in this report and as statistical categories by Statistics Canada and the Office of National Statistics (ONS), two of the national statistical agencies in our study which have released results on gender identity from their last Census. Statistics Canada (At the time of writing, Argentina's National Institute of Statistics and Census (INDEC) has yet to publish preliminary gender identity results.)

We provide this list to establish comparability across the statistical categories used in different countries and to maintain clarity throughout the report. We note that individuals whose survey responses would meet the inclusion criteria for a certain statistical category may not necessarily use that terminology to describe themselves. Ultimately, classification of gender identity should not supersede an understanding of gender as a complex and dynamic phenomenon shaped by social, cultural, and individual factors.

As norms shift, the process of gender identity data collection and analysis can improve to align. Throughout this report, we describe new survey questions as "updated," rather than as "gender-inclusive" or "trans-inclusive," to acknowledge that the effort to make data collection more inclusive is an ongoing endeavor.

Sex	According to the National Institutes of Health (NIH) Style Guide (2023), *sex* is "a biological descriptor based on reproductive, hormonal, anatomical, and genetic characteristics" and typically includes the subcategories male, female, and intersex. *Sex assigned at birth* refers to the sex recorded on a person's birth certificate. *In Canada:* Statistics Canada (2021) defines a person's *sex at birth* as the sex typically assigned to a person at birth based on their reproductive system and other physical characteristics; sex at birth is different from, but related to, gender. *Sex at birth* is a standard variable for the 2021 Census. *In England and Wales:* A cross-government harmonized standard for measuring sex is still under development (Government Statistical Service Harmonization Team 2019). On Census 2021, the ONS originally recommended that the question on sex include guidance to respondents to include sex "as recorded on one of your legal documents such as a birth certificate, Gender Recognition Certificate, or passport," but updated its guidance in March 2021 to refer to "the sex recorded on your birth certificate or Gender Recognition Certificate" (ONS 2021).

Gender

According to the NIH Style Guide (2023), *gender* refers to "socially constructed roles, behaviors, activities, and/or attributes that a given society associates with being a woman, man, girl, or boy, as well as relationships with each other," which vary across societies and over time.

In Canada: Statistics Canada (2021) defines *gender* as "an individual's personal and social identity as a man, woman or non-binary person (a person who is not exclusively a man or a woman)," incorporating both gender identity and gender expression. *Gender* is a standard variable for the 2021 Census.

In England and Wales: A cross-government harmonized standard for measuring gender is still under development (Government Statistical Service [GSS] Harmonization Team 2019).

Gender identity

According to the NIH Style Guide (2023), Statistics Canada (2021), and Census 2021 data released by the ONS (2023), *gender identity* refers to an individual's sense of their own gender and may or may not align with their sex assigned at birth.

In Canada: In addition to the previous definition, Statistics Canada (2021) acknowledges that a person's gender identity can change over time and might not match what is on their identity documents.

In England and Wales: A cross-government harmonized standard for measuring gender identity data is still under development. The standard was published in July 2020 based on research and testing for Census 2021. A review of the standard was published in 2022 (GSS 2022). Census 2021 data released by the ONS define *gender identity* as above.

Cisgender (or cis)

Refers to anyone whose gender identity aligns with the gender thought to correspond to the sex they were assigned at birth.

In Canada: The classification of *cisgender* includes all people whose gender identity corresponds to the sex they were assigned at birth (Statistics Canada 2021).

In England and Wales: Census 2021 data released by the ONS used the term "Gender identity the same as sex registered at birth" to describe people who are definitionally cisgender (ONS 2023).

Non-binary	A *non-binary person* is a person whose gender identity exists between, beyond, or in multiple positions on the gender binary. *In Canada*: The classification of *non-binary* includes any person who reports a gender identity that is not exclusively man or woman (Statistics Canada 2021). The classifications of *cisgender*, *transgender*, and *non-binary* are mutually exclusive (Statistics Canada 2021). *In England and Wales:* In Census 2021 data released by the ONS, the classification of *non-binary* included only people who specified non-binary as their gender and excluded anyone who used a different term to express their gender or did not write in a gender identity (ONS 2023).
Transgender (or trans)	A *transgender person* is a person whose gender identity differs in some way from the gender thought to correspond to the sex they were assigned at birth. *In Canada:* The classification of *transgender* includes transgender men (people assigned female at birth whose gender is man) and transgender women (people assigned male at birth whose gender is woman) (Statistics Canada 2021). The classifications of *cisgender*, *transgender*, and *non-binary* are mutually exclusive (Statistics Canada 2021). *In England and Wales:* Census 2021 data released by the ONS includes trans men and trans women among classifications for gender identity (ONS 2023). The term *transgender* or *trans* encompasses a broad spectrum of gender identities. It is generally acceptable to use the term *trans* to describe the population of people who are not cisgender, even though not all of these people would use the term *trans* to describe themselves personally (Holzberg et al. 2017). Special consideration is required to develop gender-inclusive measures that can capture gender identities that are not binary, in addition to capturing all identities that differ from sex assigned at birth. In this report, we use the terms *transgender and non-binary* to acknowledge these considerations when referring to the diverse population of people whom this research seeks to influence.
Population-based survey	A study involving a sample of people selected from a larger population. A population-based survey can be *probabilistic* or *non-probabilistic*.

Probabilistic survey	A study that uses a sample that is randomly selected and in which every member of the population of interest has a known, nonzero probability of selection. Such samples are called *probability samples* and their results are generalizable to the entire population from which the sample was drawn (Ezzati-Rice and Curtin 2001).
Non-probabilistic survey	A study that does not use a randomly selected sample, and thus does not produce generalizable results.
Nationally representative survey	A population-based survey that is also probabilistic, whose results can be generalized to the nation's population.
Two-step measure	A two-item survey question that asks respondents their sex assigned at birth and their current gender. When analyzed together, these two items provide a count of transgender and cisgender individuals. Depending on the response categories of the gender question, the two-step measure can also provide a count of those who identify outside the gender binary, such as non-binary, genderqueer, or agender.

I. Introduction

The United States (U.S.) Census asks respondents to indicate whether their sex is "Male" or "Female"—ignoring a critical distinction between sex assigned at birth and gender identity and diminishing those who identify as transgender or non-binary. Without identifying or including transgender and non-binary people in these federal surveys, we cannot understand or begin to address the systemic issues affecting this community. To promote gender-affirming and gender-inclusive policies and programming, decision makers need nationally representative data on how many Americans identify as transgender or non-binary; how gender identity intersects with other identities to influence health outcomes; or how specific policies at the local, state, or federal levels affect the health of transgender and non-binary individuals.

A. Study overview

Under the Robert Wood Johnson Foundation (RWJF) "Approaches to Advance Gender Equity from Around the Globe" grant portfolio, Mathematica and its United Kingdom (UK)-based subsidiary, EDI Global, conducted this study to translate and adapt knowledge from three countries—Argentina, Canada, and England and Wales—that had made significant progress on developing and implementing more gender-inclusive questions in their censuses (and other population-based surveys used to direct health program funding). The goal of the study is to highlight learnings relevant to the U.S. context by answering the questions in **Exhibit I.1**.

Exhibit I.1. Research questions

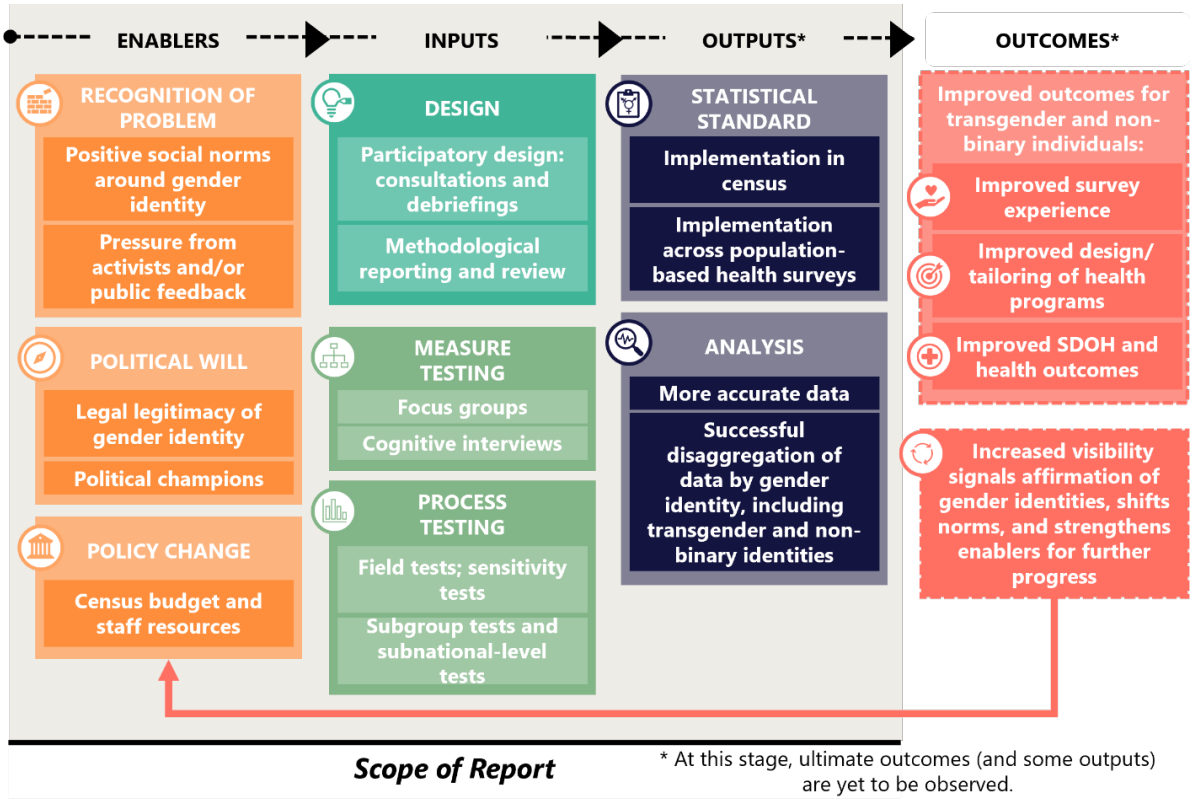
1. **What are the key sociopolitical and legal enablers to implementing gender-inclusive measures in the Census (Kingdon 2010) related to the following:**
    a. Social and cultural recognition of issues caused by lack of gender-inclusive measures (and related data)
    b. Political will to develop and implement the needed census changes
    c. Concrete strategies and resources to address these issues through the census
2. **How can the Census Bureau generate a reliable measure to be more inclusive of all gender identities for their country's context and overcome challenges related to the following:**
    a. Measure design
    b. Measure testing
    c. Process testing
3. **What are the (anticipated) benefits related to health and social determinants of health of including gender-inclusive measures in the Census and other population-based health surveys?**

To answer these questions, Mathematica drew on both primary and secondary data from the United States and the three case study countries. We conducted a literature review of journal articles, media reports, grey literature, and Census Bureau publications to understand the historical and sociopolitical contexts that enabled including new gender identity measures in each case study country and to identify potential enablers and challenges to including such measures in the United States. In addition, we reviewed methodological reports to understand how census agencies in the case study countries approached measure design and testing, as well as disaggregation and analysis of gender identity data in the countries where such analysis had already been performed. Finally, we conducted 14 key informant interviews (KIIs) with staff involved with developing gender identity measures on the census across the

countries, staff employed at non-census U.S. agencies responsible for implementing key health measures: the Centers for Disease Control and Prevention (CDC); National Center for Health Statistics (NCHS); National Center for Chronic Disease Prevention and Health Promotion); and staff at key lesbian, gay, bisexual, transgender, queer, intersex, asexual, plus other identities (LGBTQIA+) advocacy groups in the United States.[1]

To analyze this data, we employed two main qualitative case analysis methods, described in detail in **Appendix A**: (1) descriptive within-case analysis of the U.S. experience along with those of the case study countries and (2) descriptive comparative analysis across the four countries. Qualitative case analysis enabled us to answer questions about contributions in each country's natural policy context, and comparative case analysis enabled us to understand how each country's context influenced the success of various strategies to implement a gender-inclusive measure (and how the U.S. Census Bureau could tailor its approach given its the specific context to implement gender-inclusive questions in its Census and other population-based surveys). From our data collection, we developed a theory of change (ToC) outlined in **Exhibit I.2** as the organizing structure for each case study.

Exhibit I.2. ToC: enabling and implementing more inclusive gender measures in the Census to affect health outcomes for the trans population



SDOH = social determinants of health.

The ToC hypothesizes that (as per the Kingdon [2010] model of policy change) three key conditions must come together to enable adding more gender-inclusive questions in the Census. First, there must be broad social and cultural recognition that the government's definition of gender as binary (as reflected in

[1] To preserve confidentiality, we do not list the LGBTQIA+ advocacy groups nor did we record those interviews.

laws and policies, and the data that inform them) represents a key barrier to improving health and well-being for trans and non-binary people. Second, there must be sufficient political will to address the problem, as evidenced by the presence of political champions and legal reform around gender identity. Third, and finally, clear strategies to incorporate more gender-inclusive measures must exist and be feasible to implement; in other words, the Census must have budget and staff resources to realize the policy change. These enabling conditions will empower the Census Bureau to design, test, and implement a more inclusive gender measure. The ToC details specific aspects of measure design and testing, including testing for cognitive resonance (measure testing) and effectiveness of fielding (process testing)—valid questions fielded using culturally appropriate approaches are critical to generate representative data. These inputs can result in the development of a statistical standard for a more inclusive measure of gender identity to implement in the Census and other population-based health surveys. The survey results will enable generating more accurate, nationally representative data on gender identity, which can be disaggregated to better understand the transgender and non-binary population experiences and needs. Equipped with accurate information on trans and non-binary people's experiences and contexts, decision makers can use these data to develop and roll out health and other social programs that better serve this community. In addition, more inclusive gender measures on these surveys can result in an improved survey experience for these people by signaling and affirming their gender identity. The increased visibility of this population can also contribute to further evolution of social norms around gender identity—strengthening the enablers for further progress. Together, this will result in improved health and social determinant of health (SDOH) outcomes for trans and non-binary people.

B. Study rationale

Evidence shows that transgender and non-binary people in the United States experience significant economic and health disparities compared to the cisgender population (Exhibit I.3). Research from subnational sample surveys such as the U.S. Transgender Survey (USTS) indicate that trans people face a heightened risk of clinical depression, anxiety, attempted suicide, violence (including murder and sexual assault), harassment, poverty, and homelessness (Toomey et al. 2018; James et al. 2016; Human Rights Foundation 2021). These discrepancies are even more pronounced for certain subgroups within the trans community: frequently trans women and/or trans people of color. These statistics underscore the importance of understanding the implications of gender identity on health and well-being.

Existing statistics present an incomplete picture of how to advance equity for trans and non-binary people, because the true prevalence at a national level is unknown. Although subnational surveys provide important evidence of economic and health disparities experienced by a sample of transgender and non-binary Americans, they are non-probabilistic, meaning the results cannot be generalized to the entire population of such people in the United States. Widely used probabilistic surveys such as the U.S. Census, the American Community Survey (ACS) (the largest available nationally representative population-based survey in the United States),[2] and most federal health surveys, ask respondents only to indicate

[2] The ACS is conducted annually and sent to about 3.5 million addresses in the 50 states, District of Columbia, and Puerto Rico. The survey asks about topics not included on the Census, such as education, employment, and transportation. Communities, state governments, and federal agencies use data collected by the ACS to inform the programs and services—such as highways, hospitals, and schools—communities need. Along with decennial census data, the federal government also uses ACS data to inform the distribution of federal funds to states and communities (U.S. Census Bureau 2023a).

whether their sex is "Male" or "Female"—missing the critical distinction between sex assigned at birth and gender identity, both of which have their own influences on a person's health. As a result, we do not know how many Americans identify as transgender or non-binary; how gender identity intersects with other identities to influence health outcomes; or how specific policies at the local, state, or federal levels affect trans people.

Without reliable nationally representative data, the trans and non-binary community will continue to experience health inequities, as health agencies and foundations cannot design and direct program funding tailored to their needs. The federal government allocates billions of dollars each year to address the previously cited challenges for the overall population, but it cannot direct these funds to specific populations such as the trans community if it cannot identify them. In fiscal year 2015, federal programs distributed more than $689 billion in federal funding using Census Bureau data, including Medicaid, the Supplemental Nutrition Assistance Program (SNAP), Section 8 Housing Choice Vouchers, and Head Start (Hotchkiss and Phelan 2017). Specifically, the federal government uses Census Bureau data to select program recipients based on the characteristics of populations served by the program; to award, allocate, and distribute funds; and to assess administrative efficacy and program function over time (Hotchkiss and Phelan 2017). The lack of data means trans people, along with what makes their experiences and challenges unique, remain completely invisible to policymakers.

Reliable data on gender-minority populations can enable health agencies and foundations to adequately identify these people, understand their unique health contexts and drivers, and direct program funding to reach them—ultimately improving health equity and outcomes. A critical first step in this process is to

Exhibit I.3. Disparities faced by transgender people in the United States: Evidence from non-probabilistic surveys

About this data

The 2015 U.S. Transgender Survey (USTS) was the largest survey ever conducted to collect data on the lives and experiences of transgender people.

Sample: 27,715 individuals
- Ages 18+
- Residents of a U.S. state, territory, or overseas base
- Identified as transgender, genderqueer, non-binary, and other identities on the trans spectrum

Survey: A 324-question instrument, administered online during summer 2015

Analysis: Race and ethnicity, age, and additional weights applied to balance sample characteristics and attain comparability with federal data

Source: James et al. 2016

Health

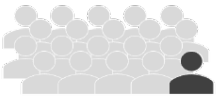
Share living with HIV

U.S. population	<1%	(1 in 300)
USTS respondents	1%	(1 in 70)
USTS, trans women	3%	(1 in 30)
USTS, Black trans women	19%	(1 in 5)

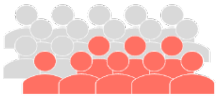
Share of USTS respondents experiencing **depression**

Share of USTS respondents experiencing **anxiety**

Share who ever attempted suicide



U.S. population: **<5%**



USTS respondents: **40%**

Safety and economic security

Share of USTS respondents who have experienced **sexual assault**

Share of USTS respondents who have experienced **homelessness**

	Poverty rate	Unemployment rate
U.S. population	14%	5%
USTS respondents	29%	11%

count trans and non-binary people in national censuses and other key population-based surveys. Standardized and large-scale data collection on gender identity can enable federal programs to quantify and better understand the disadvantages faced by trans and non-binary people at a national level and explain changes across different time periods, geographies, and socioeconomic strata. Improved data collection would also enable data users to understand the heterogeneous effects of gender-driven disparities on different intersectional identities, including race, ethnicity, income, and age. As illustrated in the ToC (**Exhibit I.2**), these data can help health agencies and philanthropic institutions to improve the design of their health programs, reduce health inequities, and improve health and SDOH outcomes for trans and non-binary people.

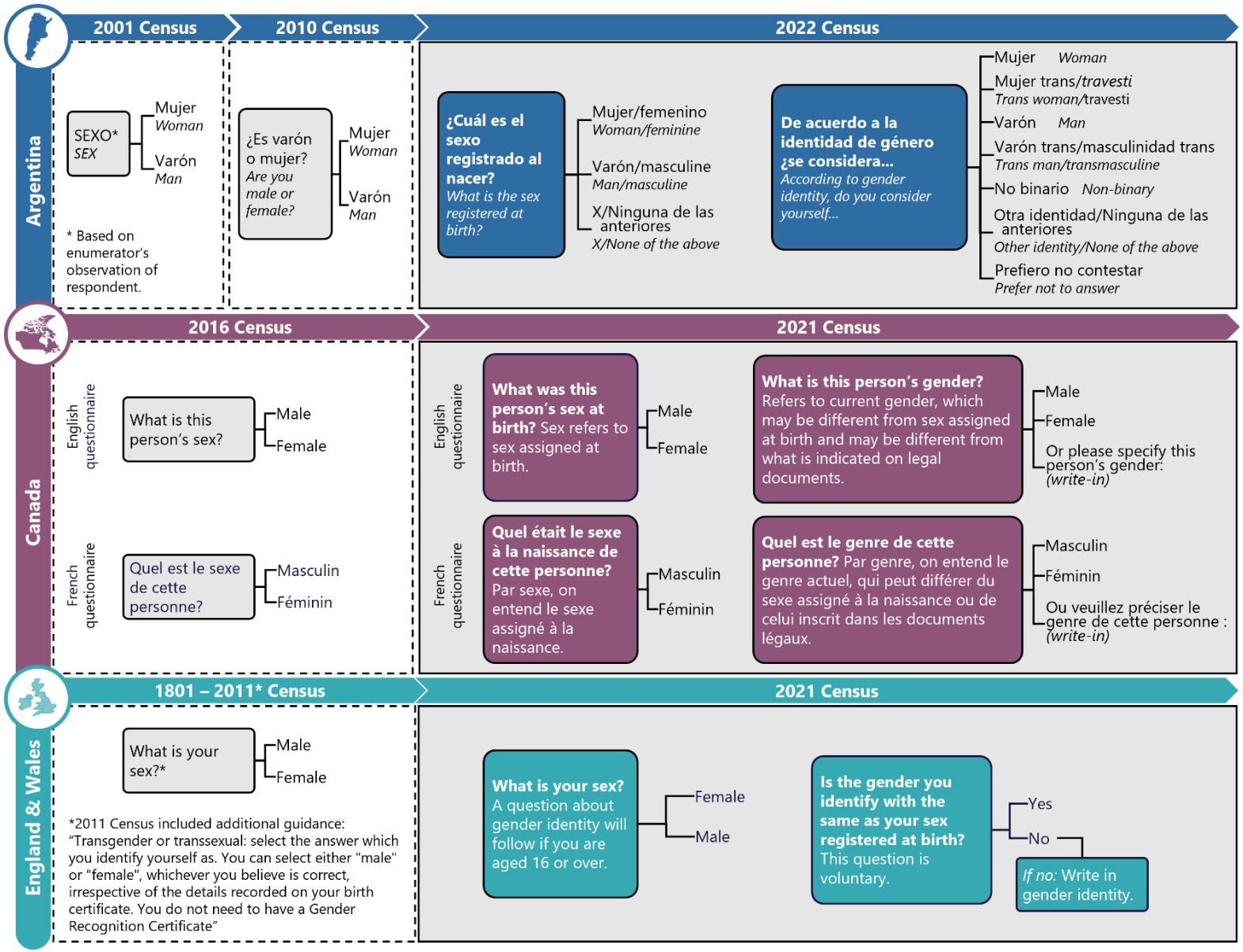
C. Road map

In Section II of this report, we summarize insights from the three case study countries (detailed case study are in Appendixes B, C, and D). For each case study country, we describe the presence of enablers before the census bureau implementing a more gender-inclusive measure, the steps the bureau undertook to design and test the measure, whether the new measure became a statistical standard adopted in the census and other health-focused population-based surveys, and resulting outcomes. Section III provides background on the progress and key outstanding challenges in the United States to implementing a more inclusive gender measure in the Census. In Section IV, we present our key findings and recommendations for the U.S. Census Bureau based on our cross-case analysis. Section IV begins by describing the key sociopolitical factors present in our case study countries, which were key to enabling the census bureaus to include a more inclusive gender measure. (These factors include national antidiscrimination laws protecting trans and non-binary people, specific government bodies or entities focused on LGBTQIA+ inclusion, and Census working groups dedicated to designing and testing the more inclusive gender measure.) Then, we provide recommendations and examples from our case studies' approaches to overcome outstanding methodological challenges in the United States (including the choice of a one- versus two-step measure, limiting the question to adults, translation into other languages, approaches to proxy response, and considerations about protecting data). Section V discusses the potential impact of including more gender-inclusive questions in the U.S. Census

II. Overview of Case Studies

Other countries' experiences in successfully designing and implementing a more inclusive gender measure on the national census can provide important insights for the United States on the way forward. We selected Argentina, Canada, and England and Wales as the case study countries for this analysis because they successfully implemented a more inclusive gender measure in their latest census, have shared information on the development of the new measure, are culturally and/or politically relevant to the U.S. context, and have relevant languages. **Exhibit II.1** shows the previous and current measures for the case study countries to illustrate their specific wording changes. Then we summarize key insights derived from the three case studies. **Appendix A** provides additional detail on our case selection process. and **Appendixes B, C and D** provide complete within-case analyses.

Exhibit II.1. Comparison of case study census questions about gender and sex



Case 1. Argentina

Instituto Nacional de Estadística y Censos (INDEC) of Argentina successfully implemented updated questions for sex and gender identity in the 2022 census. This milestone formally recognized gender diversity in the country and acknowledged that counting the trans population is a key mechanism for understanding their outcomes and needs. Although INDEC has yet to release data from the gender identity variable at the time of this report, it plans to publish a specific report on gender identity. The strategies INDEC deployed to develop and implement the more gender-inclusive measure in the census can provide important learnings to the United States about why and how to incorporate gender-inclusive questions in broad population-based surveys (summarized in **Exhibit II.2**).

Exhibit II.2. Summary of key findings from Argentina relevant to the United States

Strong transgender rights activism motivated Argentina's success in implementing the new gender identity measure in the 2022 census, as did transgender engagement and representation in the census bureau and key government agencies. The United States can also take note of the Argentinian experience with testing and refining the new measure at a subnational level, which facilitated adoption of the measure at the national level when the policy window opened.

- **Decades of trans advocacy organization work** facilitated a shift in cultural norms, and helped secure legal victories that paved the way for the adoption of a more gender-inclusive measure in the Argentinian census. For example, the shift in social norms brought additional support from public entities (universities, hospitals, police, and government officials), ultimately resulting in the passage of Argentina's Gender Identity Bill in 2012.
- **Greater lesbiana, gay, bisexual, transgénero, transexual/travesti, intersexual, queer, plus other identities (LGBTTIQ+) visibility and more data on the health and other injustices** faced by trans people fueled a growing demand for a comprehensive count of the trans population through the census. For example, the data collection efforts with the trans population led by activist organizations in the early 2000s and the resulting data provided the first evidence for the necessity to collect gender-inclusive data at the state and federal levels.
- **State-sponsored data collection efforts** provided key methodological information used to construct the national sex at birth and gender identity measures for the census pilot test in 2019. After the passing of the Gender Identity Bill in 2012, INDEC conducted three province-level surveys and one in Buenos Aires to pilot the new measure. INDEC used the resulting information to refine the measures for the 2019 national census pilot test. For example, it considered the request to include separate categories for trans man and woman.
- **Public awareness campaigns, enumerator training,** and putting the questions into operation facilitated smooth implementation of the 2022 census. Qualitative observation by INDEC during the 2019 census pilot test revealed challenges in question administration for both enumerators and respondents, which led to three action items: (1) conduct awareness raising campaigns about the new gender identity measure to minimize refusals to respond; (2) train the census enumerators on administering the measure; and (3) improve the implementation the measure, including by reading response categories aloud, noting explicitly on the form that sex refers to sex at birth.
- **Commitment of the Argentinian census bureau to publish a gender identity-specific report** from the 2022 census for federal and municipal governments will support use of the data to reinforce national and local policies and programming to improve the health and well-being of gender minorities.
- **Transgender engagement and representation in the census bureau and key government agencies.** Key informants recommended that the United States and other countries that wish to successfully implement gender-inclusive questions on population-based surveys should systematically engage local transgender organizations as key actors in the design, development, and testing of the gender-inclusive questions, and ensure there is transgender and non-binary representation in government bodies to advocate for counting the trans population to lead to more transgender-inclusive public health policies.

Case 2. Canada

The 2021 Canadian Census, implemented by **Statistics Canada**, included updated questions about sex at birth and gender to enable transgender and non-binary respondents to more authentically report their gender and to supply needed data about gender-minority populations. Since then, in April 2022, Canada became the first country to collect and publish data on gender from a national census, finding that one in every 300 people in Canada ages 15 and older are transgender or non-binary. Statistics Canada has disaggregated census data by gender diversity status to understand the demographics of various identities, such as the age distribution, geography (urban or rural), and distribution across Canada's provinces and territories and Census metropolitan areas. Efforts to collect and report on these data have been praised as an important milestone in recognizing gender diversity in Canada, as well as an important step to improve outcomes for transgender and non-binary people in the country. Although seeing the full impact of updating the census will require more time, Canada's more gender-inclusive approach already shows the early benefits, such as improved understanding of the transgender and non-binary population in Canada. Canada's experiences provide robust information relevant to the United States on how to develop, test, and implement a new statistical standard in English and French (**Exhibit II.3**).

Exhibit II.3. Summary of key findings from Canada relevant to the United States

Understanding Statistics Canada's comprehensive and collaborative approach to researching, developing, and testing the gender question with English and French speakers could inform the U.S. approach to updating the Census and other population-based surveys. Specifically, Canada's use of a write-in option and machine learning to code the write-in responses could be useful to consider. The United States should also take note of Statistics Canada's commitment to soliciting feedback from the general public and using that feedback to develop and iterate on questions.

- **Societal, political, provincial, territorial, and national changes** paved the way for a question on gender identity in the census. These changes reflected greater acceptance of transgender and non-binary identities at the subnational level, including processes for updating legal documents to reflect gender, changes in national legislation toward more protection for these populations, and interest in data that can be disaggregated by gender identity in a way that includes transgender and non-binary respondents.
- **Policy change and within-census momentum**, such as the formation and recommendations of the 2SLGBTQI+ Secretariat and feedback shared with Statistics Canada during on the 2016 Census, combined with the 2018 federal budget allocating funds for the creation of Centre for Gender, Diversity, and Inclusion Statistics, led to Statistics Canada designing a gender question.
- **Extensive research, consultations, and collaboration** with transgender advocacy groups; experts in the field of gender; Two-Spirit, lesbian, gay, bisexual, transgender, queer, intersex, plus people who identify as part of sexual and gender diverse communities, who use additional terminologies (2SLGBTQ+) government agencies; and other international agencies that were developing new data collection protocols around gender, academics, and people with lived experience and from the wider 2SLGBTQ+ population was crucial to understand the processes and challenges relating to collecting reliable data on the transgender and non-binary populations living in Canada.
- **Multiple (three) rounds of testing** ensured the new items were clear in English and French. One testing approach was to conduct focus groups across Canada with members of 2SLGBTQ+ communities to comment on the new gender and updated sex at birth questions. Quantitative tests assessed the questions with a large sample of Canadians to understand response rates and distribution of responses.
- **A mix of machine learning and manual coding** enabled efficiency in coding the write-in responses to the question on gender. This was helpful considering the diversity of write-in responses received by Statistics Canada.

Case 3. England and Wales

The Office for National Statistics (ONS), the statistics bureau responsible for the census in England and Wales and for producing United Kingdom (UK)-wide statistics, made a significant update to the Census 2021 in England and Wales by employing a two-step measure of gender identity and sex-at-birth (replacing a two centuries-long approach that conflated gender with sex). This decision represented an important milestone in recognizing and acknowledging gender diversity in England and Wales. In addition, these data for 262,000 people older than 15 who identified with a gender different from their registered sex enabled new analyses to inform future policymaking to improve the health and well-being of transgender and non-binary people. Several key factors enabled England and Wales to include this new measure, which provide valuable insights for the United States as it determines whether and how to include gender identity questions in the Census and other population-based surveys (**Exhibit II.4**).

Exhibit II.4. Summary of key findings from England and Wales relevant to the U.S.

Emulating the ONS' commitment to transparency and comprehensive research in developing and testing the gender identity question could help the United States mitigate polarization in public discourse. The ONS' extensive and rigorous testing underscores the importance of evaluation in the process of developing the gender identity question, while also emphasizing the need for data protection and privacy in reporting to maintain accountability in census operations. The United States should heed the lessons learned by the ONS regarding how it incorporated various cultural perspectives in developing and implementing census questions; this approach will promote inclusivity and accuracy in data collection within a diverse society.

- **Laws over the past few decades** in the UK have set the stage for recognizing and protecting transgender people. For example, the Gender Recognition Act of 2004 enabled people to change their legal gender and the Equality Act of 2010 mandated workplace protections for transgender people.
- **Societal and political changes** increased demand for a question on gender identity in the census. These changes reflected greater acceptance of transgender and non-binary identities among the general public and changes in the legislative landscape toward more protection for these populations.
- **Extensive research, consultations, collaboration, and transparency** with transgender advocacy groups, government agencies, and academics informed the development and successful implementation of the gender-inclusive question. The ONS faced challenges from public pressure, legal disputes, and differing opinions within the academic community, particularly regarding the wording of the question. However, extensive testing and transparency in the process mitigated these challenges.
- **Multiple years and 13 iterations of qualitative and quantitative testing** conducted from 2017 through 2019 helped to develop, test, and ensure the effectiveness of the new gender identity question.
- **Evidence of disparities** enabled policy action. Researchers have analyzed the 2021 census and found that transgender people more frequently report their overall health as 'not good' compared to cisgender individuals. This underscores the need for policymakers to address these disparities through tailored interventions and collaboration with the ONS to enhance data use while acknowledging limitations related to data aggregation and challenges counting the transgender population.

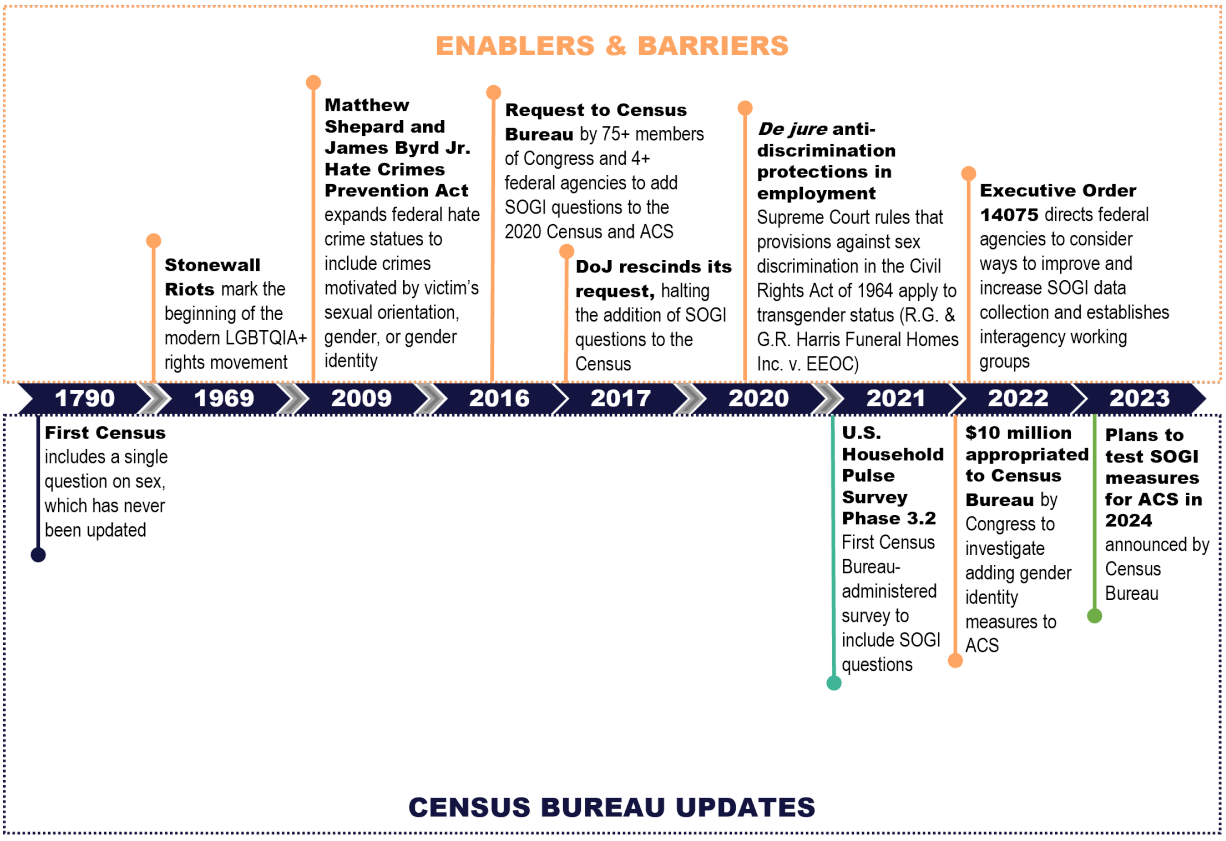
III. The United States Census: Progress and Challenges to Implementing a More Gender-Inclusive Measure

In this section, we provide background on the progress and key outstanding challenges in the United States to implementing a more inclusive gender measure in the Census**.**

A. Sociopolitical and legal enablers

Several legal, political, and cultural events have set the stage for the U.S. Census Bureau to evolve the gender identity measure in the census (**Exhibit III.1**), but key challenges remain.

Exhibit III.1. Timeline illustrating key legislative and historical events related to transgender rights in the United States, as well as key updates to the census



ACS: American Community Survey; EEOC: Equal Employment Opportunity Commission; SOGI: sexual orientation and gender identity.

RECOGNITION OF PROBLEM

Transgender and non-binary people experience significant inequities in the United States, particularly related to health and SDOH. Despite these inequities, to date, there has been a lack of broad social and cultural recognition and representative data to enumerate these inequities. The definition of gender as binary (as reflected in laws and policies, and the data that inform them) on the U.S. Census and other large population-based surveys represents a key barrier to understanding and improving the health and well-being for trans and non-binary people.

Historic criminalization of gender nonconformity. Early laws in the United States criminalized both homosexuality and gender nonconformity. As early as 1848, laws were passed in American cities outlawing cross-dressing; officials used these laws to arrest transgender and gender nonconforming individuals. Before 1962, sexual activity between same-sex people was a felony in every state. Into the 20th century, police frequently raided LGBTQIA+ establishments across the United States using laws criminalizing homosexual conduct and cross-dressing as justification; police often harassed, beat, and arrested patrons of these establishments. Amid the growing political activism of the 1960s, LGBTQIA+ people began to organize and advocate for their civil rights.

Stonewall and the launch of the modern LGBTQIA+ civil rights movement. The laws described earlier, and the police brutality they enabled, were the catalyst for the Stonewall Uprising of 1969. Historians commonly cite this series of protests by gay men, transgender women, and their allies as the beginning of the modern LGBTQIA+ civil rights movement. Within two years of the Stonewall Uprising, gay rights organizations got established in all major U.S. cities (The Leadership Conference on Civil and Human Rights 2009). Explicitly legalizing gay marriage emerged as the preeminent LGBTQIA+ civil rights issue in the late 1980s, as the AIDS epidemic brought issues of death benefits and inheritance rights to the forefront. Opposition to same-sex marriage by socially conservative groups culminated in the passage of the federal Defense of Marriage Act (DOMA) in 1996. DOMA allowed states to deny recognition of same-sex marriages conducted by other states and prohibited recognition of same-sex marriages for all federal purposes, including insurance benefits for federal employees, Social Security survivors' benefits, immigration, bankruptcy, and filing joint tax returns.

Legislative and judicial victories for LGBTQIA+ civil rights. One of the first judicial victories for the LGBTQIA+ civil rights movement was the 2003 U.S. Supreme Court case *Lawrence v. Texas*, in which the Court voted 6-3 to strike down state sodomy laws. However, as of 2022, 14 states still had sodomy laws they do not currently enforce. In 2013, the U.S. Supreme Court ruled 5-4 in *United States v. Windsor* that DOMA was unconstitutional. In response to this ruling, the Obama administration began extending federal benefits to same-sex couples, including immigration sponsorship, Medicare and Medicaid benefits, and joint federal tax filings. By 2014, more than 30 states and the District of Columbia (DC) had legalized same-sex marriage by statue, court ruling, or voter initiative. In 2015, the U.S. Supreme Court ruled 5-4 in *Obergefell v. Hodges* that all states must grant same-sex marriages and recognize same-sex marriages granted in other states. Despite these significant advances in LGBTQIA+ civil rights, the current judicial climate in the United States suggests these gains are not guaranteed. In 2022, Supreme Court Justice Clarence Thomas wrote in his concurring opinion in *Dobbs v. Jackson*, which struck down the constitutional right to abortion, that the court should reconsider prior decisions decided on substantive due process grounds, including *Lawrence v. Texas* and *Obergefell v. Hodges*.

Lack of comprehensive federal legislative and judicial protections for trans people. Although significant progress has been made for LGBTQIA+ civil rights, explicit protections for transgender people are still lacking. At the federal level, no law designates transgender identity as a protected class. A single U.S. Supreme Court case has ruled on the rights of transgender people at the federal level. In 2020, the Court ruled 6-3 in *R.G. & G.R. Harris Funeral Homes Inc. v. Equal Employment Opportunity Commission* that the Civil Rights Act of 1964's prohibition of employment discrimination on the basis of sex extends to an individual's transgender identity status. This case provided judicial precedent for wider legal protections

beyond employment, but Congress has yet to pass more comprehensive legislation at the federal level. The most significant federal legislation protecting transgender people became law in 2009 when President Obama signed the Matthew Shepard and James Byrd Jr. Hate Crimes Prevention Act. This law expanded the federal hate-crime statues to include crimes motivated by a victim's actual or perceived gender, sexual orientation, or gender identity. In 2023, the Equality Act was reintroduced in the U.S. Congress. The proposed law would amend existing civil rights statutes such as the Civil Rights Act of 1964, the Fair Housing Act, and the Equal Credit Opportunity Act to explicitly include sexual orientation and gender identity (SOGI) as protected characteristics. If passed, this federal-level mandate could pave the way for including gender-inclusive measures in the next Census.

Evolution of U.S. Census demographic categories, but lack of progress on gender identity. The U.S. Census lacks any questions on gender identity: currently, it asks respondents to indicate whether each person residing in the household's sex is either "Male" or "Female." Every U.S. Census since 1790 has included three demographic classifiers: age, race, and sex (U.S. Census Bureau 2022). The sex question has never been updated or expanded to be more inclusive of the concept of gender identity, but the race question has significantly evolved over time, and a question on sexual orientation appeared on the U.S. census for the first time in 2020.[3] These represent proof points that the U.S. census can successfully adapt to incorporate more inclusive measures as it strives to accurately reflect the diverse make-up of the United States. It is logical that as transgender and non-binary gender identities continue to gain legal recognition and social acceptance in the United States, the Census will adapt the sex question to include this population.

Building public pressure for the United States to adopt a more gender-inclusive measure. Health researchers and policymakers began calling to include gender identity questions on U.S. population-based surveys and the resulting data are beginning to increase the visibility of the trans population. Health researchers were among the first to begin calling for the inclusion of gender identity on health surveys in the United States. State-level movements to include gender identity questions in health surveys followed, leading to the successful inclusion of optional SOGI questions in the Behavioral Risk Factor Surveillance System (BRFSS) health system survey. ACS has not included gender identity questions yet, but it has published characteristics and the geographic distribution of the estimated 980,000 same-sex couple households in the United States Although the 2020 Census did not include gender-inclusive questions, the Census Bureau released data on sexual orientation, which was indirectly assessed as respondents were able to select "same-sex husband/wife/spouse" or "same-sex unmarried partner" on the Relationship to Householder question.

Polarization of the issue at the state level and lack of political will to pass federal-level protections (Box III.1). As a result of the lack of federal protections described before, state laws and policies vary widely, with roughly half of states making significant progress toward prohibiting discrimination against trans and non-binary people, and half adopting anti-transgender legislation in

[3] The first indirect assessment of sexual orientation occurred in the 2020 Census: it asked respondents about their relationship to the person with whom they share their home (called the Relationship to Householder question) and included these relationship categories: opposite-sex husband/wife/spouse, same-sex husband/wife/spouse, opposite-sex unmarried partner or same-sex unmarried partner.

recent years. These state differences speak to the great divide that makes it difficult to reach consensus and achieve the political will to motivate further federal protections for transgender people.

Exhibit III.2. State-level laws and policies in the United States regarding trans and non-binary people

State-level protections. Twenty states explicitly prohibit discrimination against trans people in employment, housing, and public accommodations. Another 27 states allow transgender people to change their gender on identity documents, such as birth certificates and driver's licenses, without proof of sex reassignment surgery or other medical certificates. Fourteen states and DC offer the option to put "X" as a gender marker to denote unspecified or another gender identity instead of male or female on driver's licenses, and nine states have this option for birth certificates (Movement Advancement Project 2020). In 2010, only nine states prohibited discrimination on the basis of gender or sexual identity in schools compared to 15 states and DC in 2020. In addition, as of 2020, 18 states and DC had banned conversion therapy for transgender or gay youth (Movement Advancement Project 2020).

State-level discrimination. Despite these advancements, there has been significant pushback against transgender rights at the state level in recent years. 2022 saw a record-breaking number of anti-LGBTQIA+ legislation introduced and enacted in a single legislative session, with more than 300 anti-LGBTQIA+ bills proposed and 24 adopted by state legislatures (Berg-Brousseau 2022). Seventeen of these laws were explicitly anti-transgender bills that limited access to gender-affirming care for transgender youth, prohibited transgender girls and women from competing on sports teams that match their gender identity, and banned the instruction of LGBTQIA+ issues in schools (Berg-Brousseau 2022).

The controversy and shifting support from the federal administration surrounding attempts to update the census reflect this polarization. Although several federal agencies have applied pressure on the U.S. Census Bureau to include questions on gender identity since 2016, the topic has been hotly contested. In 2016, more than 75 members of Congress and four federal agencies (the U.S. Department of Justice, Centers for Medicare & Medicaid Services, U.S. Department of Housing and Urban Development, and Environmental Protection Agency) formally asked the Census Bureau to add SOGI questions to the 2020 Census and ACS (Wang 2017b).[4] As a result, on March 28, 2017, the Bureau released a draft of proposed topics for 2020 Census and ACS that included SOGI (U.S. Census Bureau 2017). However, within hours of this draft proposal appearing online, the topic of SOGI was removed. The Department of Justice then rescinded its request, prompting the Census Bureau to stop considering the topic altogether (Wang 2017b). A statement by the Census Bureau said the report "… inadvertently listed SOGI as a proposed topic in the appendix," clarifying that "this topic is not being proposed to Congress for the 2020 Census or American Community Survey" (Wang 2017a). The director of the Census Bureau denied any political interference in the decision to not include SOGI in the 2020 Census or ACS and he resigned his position

[4] The US Census Bureau oversees ACS, a yearly survey sent to a sample of U.S. households designed to provide local and national leaders with supplementary demographic information such as education, employment, internet access, and transportation that can be used for programs, economic development, emergency management, and understanding local issues and conditions. The ACS is vital to understand SDOH in American communities, but it has yet to include questions about gender identity. However, in 2021, the ACS released a report that examined the characteristics and geographic distribution of the estimated 980,000 same-sex couple households in the U.S. based on the 2019 ACS one-year estimates. The 2019 ACS assessed same-sex couples using the same question as the 2020 U.S. Census (see above). This was the first year that same-sex spouse or same-sex unmarried partner were included on the Relationship to Householder question on the official ACS (U.S. Census Bureau 2020).

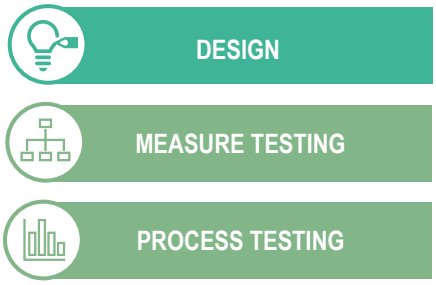
effective June 30, 2017. Despite these statements from the director, it appears the change to a political administration hostile to LGBTQIA+ equality in 2017 led to the shift in the federal mandate to include SOGI and prompted the Census Bureau to stop considering the topic for inclusion on the 2020 Census.

The U.S. Census Bureau has established a clear strategy and a sufficient budget and staff resources to implement a more inclusive gender measure. However, even with congressional funding to investigate the need and process for adding a potentially more inclusive gender question, the actual addition of the question to the Census remains vulnerable to political interference. The long period of time required to develop and test a question so it results in a valid measure also leaves more opportunity for such political attacks forestalling the ultimate implementation of a more gender-inclusive measure.

Federal funding for a gender identity question secured for the next Census (2030). In 2022, Congress appropriated $10 million to the U.S. Census Bureau to investigate adding gender identity measures to the ACS (Schneider 2023). A measure tested, validated, and included on the ACS would be a prime candidate for inclusion on a future Census. In addition, President Joseph Biden signed an executive order on "advancing equality of lesbian, gay, bisexual, transgender, queer, and intersex individuals" that directed federal agencies to consider ways to improve and increase data collection on gender identity and established interagency working groups to advance effective collection and use of gender identity data. In September 2023, the U.S. Census Bureau announced plans to conduct a test of SOGI measures for the ACS in 2024 (U.S. Census Bureau 2023b). A successful test of gender identity measures would be extremely encouraging progress toward adding gender identity to the 2030 Census.

Years-long measure development and the risk of political disruption. The Census Bureau must have a policy or programmatic need to add new questions to the Census and the measure development process can be vulnerable to political interference. Either a request to the Census Bureau from another federal agency or an act of Congress can accomplish the policy or programmatic need. However, this does not guarantee including these questions, and political obstacles can derail efforts to add new items at any point during the years-long Census question development phase. It takes many years for the Census Bureau to develop, test, and validate new potential Census measures, with tests of new items often conducted five or more years before the next Census. The 2016 formal ask, discussed earlier, by the U.S. Department of Justice and others to include SOGI that was rescinded less than a year later demonstrates the potential vulnerability of the Census to political interference.

B. Measure design and testing



Despite the ongoing sociopolitical and legal challenges the United States faces, which prevent the adoption of a more inclusive gender measure on the Census, the U.S. Census Bureau and other agencies have made progress with researching, designing, and testing such a measure. However, key informants highlighted several outstanding methodological challenges.

Significant research on gender identity measure design by the U.S. Census Bureau. The U.S. Census Bureau already has experience developing, testing, and implementing gender-inclusive questions in population-based surveys. Since 1970, it has conducted content analysis tests to improve the design, validity, and functionality of the Census. These tests aim to determine if changes to wording, response categories, and definitions improve the quality of Census data (U.S. Census Bureau 2021). The Bureau has conducted research on gender-inclusive items over the years and seems to have a strong, fact-based argument for which measures to include. In 2017, the Census Bureau released a draft of proposed topics for the 2020 Census and ACS, which included SOGI (the 2020 Census did not include these questions, as described before). In response to the COVID-19 pandemic, the U.S. Census Bureau launched an experimental survey in 2020, The Household Pulse Survey, to measure the impacts of the pandemic at the national and state levels and for the 15 largest metropolitan statistical areas in the United States (U.S. Census Bureau 2023c). Phase 3.2 of the Household Pulse Survey, launched in 2021, added questions about SOGI (File and Lee 2021). This data collection has been a successful proof of concept that collecting gender identity data is feasible. In September 2023, the U.S. Census Bureau announced plans to conduct a test of SOGI measures for the ACS in 2024 (U.S. Census Bureau 2023c). The Bureau plans to test question wording, response categories, placement of SOGI questions on the survey, and how these questions perform when completed by proxy respondents. The test will use a two-step gender identity measure that includes a non-binary response category and a write-in option for other gender identities. In addition, the Bureau plans to ask the current gender question only of people who are 15 and older. This is a critical step toward including gender identity on the 2030 U.S. Census, as a measure implemented on the ACS would be a prime candidate for inclusion on the Census.

Exhibit III.3. Lessons learned from other federal survey implementation of SOGI questions

The Behavioral Risk Factor Surveillance System (BRFSS)—the largest continuously conducted health system survey in the world—includes optional modules with questions about SOGI. In 2022, 31 states (and Guam) used this module (CDC 2021). Language-related challenges appeared when asking these questions in surveys with members of the United States' large Spanish-speaking population: BRFSS noted in 2020 that "Translation of these questions may be modified by states to match the dialect of Spanish that is most common within any state. Interviewers have reported issues with some of the translations for some Spanish-speaking respondents…. Researchers should also note that the number of refusals and 'do not know' responses is higher for SOGI questions than for most other sections/modules of the questionnaire" (CDC n.d.).

Other federal surveys have shown survey designers might also not fully understand the distinction between sexual orientation and gender identities, which poses challenges for collecting complete and accurate information. In 2021, two U.S. surveys, the National Health Interview Survey (NHIS) and Population Assessment of Tobacco and Health (PATH), included questions about gender identity only if the respondent indicated on a question about sexual orientation that they do not identify as gay, lesbian, bisexual, or straight, even though gender identity is separate from sexual orientation. GLAAD, the largest LGBTQIA+ media advocacy organization in the world, notes that "Transgender people may be straight, lesbian, gay, bisexual or queer. For example, a person who transitions from male to female and is attracted solely to men would typically identify as a straight woman. A person who transitions from female to male and is attracted solely to men would typically identify as a gay man" (GLAAD 2023). After this, the 2022 NHIS added a new gender identity item as an emerging content question (CDC 2022). NHIS now uses a two-item methodology to assess gender identity, first asking sex assigned at birth (Male, Female, or I don't know) and then "Do you currently describe yourself as a man, as a woman, or in some other way?" (CDC 2022).

C. Key outstanding challenges

With the progress made in the United States toward a more gender-inclusive question in the Census, several challenges remain—some unique to the United States and others similar to what other countries have faced. The diversity of culture and language in the country makes it difficult to standardize questions in a way that will yield accurate results from everyone. Concerns about confidentiality also present several challenges. We discuss this and other challenges next.

i. Identifying an accurate gender measure: design and testing of one-step versus two-step measures and inclusion of write-in options

U.S. surveys use multiple methods to measure gender identity, though consensus is building that using a two-item question is the most accurate method. A one-step measure commonly asks respondents "Are you male, female, or transgender?" U.S. population-based surveys, including BRFSS, PATH, and the Health Care Patient Survey (HCPS) and National Inmate Survey (NIS), use or have used a one-step measure for gender identity (Ellis et al. 2017). However, this type of measure is associated with the most measurement error because it lacks specificity and does not capture people with diverse experiences of gender who might not identify with the term *transgender* (National Academies of Sciences, Engineering, and Medicine [NASEM] 2022).

By contrast, a two-step measure asks respondents their sex assigned at birth and their current gender. When analysed together, these two items provide a count of transgender and cisgender people. Depending on the response categories of the gender question, the two-step measure can also provide a count of those who identify outside the gender binary, such as non-binary, genderqueer, or agender. However, the two-step approach presents challenges; cognitive interviews have shown that some transgender respondents' express discomfort with the "sex assigned at birth" question (NCHS KII).

Some non-binary and genderqueer respondents have also reported they do not see their identity reflected in the gender response options. Limiting gender response options to male and female and not having an "other" or write-in option for gender identity could contribute to undercounting the transgender population in general, but particularly the non-binary and genderfluid populations. A two-step measure of gender identity on the National Crime Victimization Survey (NCVS) (**Exhibit III.4**) enabled the U.S. Department of Justice to publish estimates of violent crime victimization within the cisgender and transgender populations with low measurement error (NASEM 2022). The Household Pulse Survey used the same two-step measure, which enabled the U.S. Census Bureau to report on the financial impact of the COVID-19 pandemic on transgender Americans (Glassman, n.d). However, estimates from these surveys might not be entirely accurate because they excluded certain individuals, likely non-binary or genderfluid respondents, who selected "none of these" for the second question. This was because no write-in data were available to support their inclusion in the transgender category (Truman and Morgan 2022). Feedback from respondents suggested some do not

Exhibit III.4. Sex at birth and gender identity questions on the National Crime Victimization Survey (2020–2021) and the Household Pulse Survey (2021)

What sex were you assigned at birth, on your original birth certificate?

A. Male
B. Female
C. Refused
D. Don't know

Do you currently describe yourself as male, female, or transgender?

A. Male
B. Female
C. Transgender
D. None of these

like having transgender as a separate option for current gender identity as it might imply that trans men and women are not male or female and this is confusing for respondents (Ellis et al. 2017; NCHS KII). Although there are challenges, the implementation of these surveys is compelling evidence that the two-step approach is feasible on U.S. surveys.

Despite challenges with the two-step measure, such as such as discomfort with the sex at birth question among some transgender respondents and concerns about response options not accurately capturing non-binary or genderfluid people, experts agree the two-step approach is the best way to measure gender identity (NASEM 2022). The success of the Household Pulse Survey and NCVS using this method provides strong evidence of its feasibility and acceptance in U.S. surveys. As described, the U.S. Census Bureau plans to conduct a test of SOGI measures for the ACS in 2024 using a two-step measure.

ii. Age of respondent

Key informants from the U.S. Census Bureau noted there are outstanding challenges regarding best practices for gender identity measures for youth, including whether there should be a minimum age for asking gender identity questions and how to adapt these questions for youth. Youth are often still exploring their gender identity and still determining their preferred language to describe their gender (DeChants et al. 2021). Youth language often changes quickly and terms that resonate with youth might differ from the terms used by adults. Researchers and statistical agencies need to continuously refine and adapt gender identity measures for youth to reflect these changes (DeChants et al. 2021). Research from the U.S. Census Bureau suggested the effectiveness of question wording and response options for SOGI questions likely varies across respondents of different age groups, due to different understandings of these concepts across generations (Ellis et al. 2017). Further research is needed to understand how to tailor gender identity measures for youth and the best age to begin asking this item on U.S. surveys (NASEM 2022).

Exhibit III.5. Gender identity question from Youth Risk Behavior Surveillance System

Some people describe themselves as transgender when their sex at birth does not match the way they think or feel about their gender. Are you transgender?

A. No, I am not transgender
B. Yes, I am transgender
C. I am not sure if I am transgender
D. I do not know what this question is asking

The Youth Risk Behavior Surveillance System (YRBSS) piloted a one-item gender identity question in 2017 for youth ages 13 and older (NASEM 2022). The 2023 YRBSS now includes a question on gender identity on the standard and national high school questionnaire (**Exhibit III.5**). Data from the 2017 and 2019 YRBSS show that 1.4 percent (300,100) of youth ages 13 to 17 in the United States identify as transgender. Youth are more likely to identify as transgender compared to adults ages 25 to 64 (0.5 percent) or adults ages 65 or older (0.3 percent). Youth comprise 18 percent of the total transgender population in the United States (Herman et al. 2022).

Exhibit III.6. Politicizing SOGI questions for youth

Efforts to collect gender identity data from youth on federal surveys have been targets of political interference by state governments. At least seven states have announced they will not participate in the 2023 YRBSS survey and will instead administer their own, state-developed surveys (Chang 2022). The Florida Commissioner of Education sent a letter to a superintendent whose district still used the YRBS survey saying the "… inflammatory and sexualized survey is not in the best interest of Florida students" (Merod 2023).

iii. Language translation of gender-identity measures

The U.S. Census is offered in English and 12 other languages, adding a layer of additional testing and assessment for adding gender-identity measures that are culturally and linguistically appropriate in non-English languages. Direct translation of words commonly used to describe sex and gender in American English can be difficult or impossible to translate into other languages. Some members of the transgender population might have culturally specific gender identities (Baker et al. 2016), such as Two-Spirit in many Native American communities and "same-gender-loving" in some African American communities, and English terminology might be insufficient to express these identities. In addition, some languages lack words that distinguish between *sex* and *gender*.

Most research in the United States on non-English gender identity measures has focused on the Spanish language. In cognitive interviews testing the two-step measure, Spanish speakers appropriately responded to gender identity questions, including older, cisgender adults who were unfamiliar with the term *transgender*. California translated a two-step measure into Cantonese, Korean, Mandarin, Tagalong, and Vietnamese, but small sample sizes prevented detailed analysis of the results (NASEM 2022). The translation of question wording and response categories for gender identity requires further research to ensure measures are culturally relevant and linguistically appropriate.

iv. Sample size and confidentiality

U.S. respondents could have concerns about privacy and data protection when disclosing gender identity issues, particularly if they are part of a marginalized group. However, cognitive interviews conducted by the Census Bureau and Bureau of Labor Statistics in 2017 indicate most respondents did not find questions about gender identity to be more sensitive or difficult than other items on the Census. At the same time, most of the respondents who found the questions sensitive were transgender people, many of whom feared their status as a transgender person could be used for discrimination under the current political climate (Ellis et al. 2017). These findings highlight that concerns about confidentiality and discrimination can be especially relevant for members of the transgender population, who represent the very people for whom these questions are intended. Some transgender people have these concerns because their identity has made them the subject to other forms of discrimination, dependent on social welfare, and/or involved in the criminal justice system (Baker et al. 2016).

Perversely, anonymity is possible only if enough people respond to the gender identity question. Key informants who work on BRFSS noted that reporting gender identity data is possible only when sample sizes are large enough to protect the anonymity of respondents. As key informants from LGBTQIA+ advocacy groups noted, confidentiality concerns are not a reason to avoid collecting gender identity data entirely, but the U.S. Census Bureau and other federal agencies must address and consider community concerns regarding privacy and safety during survey development and planning. It is important to note that the Census Bureau has demonstrated experience protecting transgender people's confidentiality and data from the Household Pulse Survey; in this instance, the U.S. Census Bureau successfully disaggregated data by gender identity without compromising confidentiality, providing an encouraging sign that privacy concerns can be overcome.

v. Accuracy of proxy response

One of the most critical considerations for adding gender identity measures to the U.S. Census is ensuring adequate performance during proxy response. Feasibility studies have indicated that proxy collection of gender identity can be successful (Holzberg et al. 2019). However, there is a lack of quantitative feasibility testing with nationally representative probability samples (NASEM 2022). Quantitative feasibility testing of proxy response represents a critical area for further research before the U.S. Census can add gender identity questions.

Proxy response is a significant potential source of measurement error as the sole household respondent might not accurately report the gender identity of other members of the household. In previous Census Bureau research, although gender identity questions were not particularly difficult to answer for proxy respondents, those who did report difficulty cited not knowing the gender identity of someone else in the household as the issue (Ellis et al. 2017). Among participants in Census Bureau focus groups with transgender people, some respondents said a household member would likely refuse to report their gender identity on their behalf and, overall, very few respondents felt members of their household would report their gender identity accurately (Holzberg et al. 2017). Specifically, respondents cited confidentiality concerns or a lack of knowledge of the gender identity of other household members. Interviews with Census Bureau researchers highlighted that these difficulties are unique to the Census and ACS, as they are the only major federal surveys to use a proxy response protocol and emphasized that this is a critical challenge to implementing gender identity questions in the next Census.

vi. Survey administration mode impact on response quality

The format of gender identity questions can vary depending on survey administration methods (online, paper, or telephone), and more research is needed to understand how these methods affect participants' responses. In the United States, population-based surveys, including the Census, employ various administration methods. Key informants have noted slight differences in how to word questions based on the survey method used. Therefore, when recommending a gender identity measure, it is essential to ensure the measure has been tested or previously administered across multiple modes of administration to ensure its effectiveness.

IV. Key Findings and Recommendations from Argentina, Canada, and England and Wales

Learnings from our cross-case analysis of other countries' experiences provide important insights for the United States on the way forward. As described in **Appendix A**, we employed a descriptive comparative analysis across the four countries to explore how each country's context influenced the success of various strategies to implement a gender-inclusive measure (and how the U.S. Census Bureau could tailor its approach given its the specific context to implement gender-inclusive questions in its Census and other population-based surveys). **Exhibit IV.1** summarizes our key findings and recommendations, and we describe in more detail next.

Exhibit IV.1. Key cross-case analysis findings and recommendations, by research question

RQ1. Key sociopolitical and legal enablers to implementing gender-inclusive measures in the Census	
Problem recognition	In two of our three case study countries (Argentina and the UK), ***strong activism and research*** contributed to broad social and cultural recognition that the government's definition of gender as binary (as reflected in laws and policies, and the data that inform them) represents a key barrier to improving health and well-being for trans and non-binary people. In Canada, many respondents provided feedback on the 2016 Census and other publications requesting a gender question. This was within the backdrop of more policies and legislation passing to protect transgender and non-binary people in Canada. In contrast, in the United States activism and research have not yet fully surmounted the entrenched polarization in public opinion about transgender rights and the need for accurate data on transgender and non-binary people.
Political will	Unlike the U.S, national ***anti-discrimination laws*** in all three case study countries have played a significant role in promoting transgender inclusion and equality, which has facilitated the inclusion of gender identity census measures. The 2023 Equality Act currently before Congress could be key for the shift in political will and policy change.
	Both Argentina and Canada created a ***specific government entity or body focused on LGBTQIA+*** inclusion; in Argentina a transgender political champion led this effort. The United States could benefit from creating such a group. It remains to be seen whether more gender diversity in representation will translate to collecting more transgender-inclusive data.
Policy change	Census bureaus in all three case study countries created a specific ***working group*** or solicited public feedback around creating a more inclusive gender measure. Although the United States has invested money in researching a gender identity measure for the 2030 Census, it could benefit from creating a specific body or working group focused on the topic.
RQ2. Methodological challenges to developing a reliable measure of inclusive gender identity	
Measure design	The United States should consider ***empirical validation*** through an analysis of response rates to assess its potential impact when testing a two-step measure. It could consider adopting Canada's approach to testing and processing a write-in option using machine learning techniques.
Measure testing	Although gender is an appropriate topic for youth, the United States could consider following the approach used by England and Wales to limit asking the gender identity question to ***older youth*** on the Census or the approach used by Canada of releasing gender data only about those ages 15 or older, due to concerns about privacy protections and response accuracy.
	The United States could continue cognitive testing and piloting of gender identity measures in Spanish and in other common ***languages*** and consult with organizations and other countries representing diverse cultural and linguistic transgender communities.

	The United States could also conduct quantitative testing of the acceptability and reliability of a gender identity measure during ***proxy response*** and provide specific guidance when a resident answers on behalf of someone else, as England and Wales did.
Analysis	The United States should continue its standard practice to not report data below a specific ***sample size threshold*** for any new gender identity measure. Census enumerators should receive training to communicate this effectively to respondents to assuage their fears about the disclosure of sensitive information.

RQ3. Anticipated benefits related to health and SDOH of including gender-inclusive measures in the Census
Early responses from Canada showed positive feedback from some transgender and non-binary people, mainly reporting a better ***survey experience***. However, some other transgender and non-binary people voiced concerns about having these questions on the survey.
In all three case study countries, the new census measure has led to ***increased visibility*** of transgender identities. More time is needed to assess how the increased visibility will ultimately shift norms and enable further progress for transgender rights, health, and well-being.
In the UK and Canada (where census bureaus have made, to varying degrees, the sex assigned at birth and gender identity data available), the media and researchers emphasized that the new data can and should be used to improve ***support for LGBTQIA+ people***, including in health policies and programs.
More time is needed to understand the impact that updating census instruments to be more gender inclusive has on the ***SDOH and health*** outcomes for transgender people.

A. Sociopolitical and legal enablers

The potential factors that contributed to the enabling environment for more inclusive gender identity measures in the censuses varied in the case study countries. We consider the similarities and differences to the U.S. context to inform how the United States could respond and take action to reduce barriers in its own context.

Activism and research to increase public awareness and surmount polarization. In both Argentina and the UK,[5] strong activism and research contributed to broad social and cultural recognition that the government's definition of gender as binary (as reflected in laws and policies, and the data that inform them) represents a key barrier to improving health and well-being for trans and non-binary people.

From Argentina. Argentinian activists organized demonstrations demanding legal recognition, led data collection efforts that revealed the sociodemographic situation of the transgender population in Argentina, and employed political and judicial strategies to promote transgender rights at both provincial and federal levels. For example, Communidad Homosexual Argentina—the first LBGTTIQ+ advocacy organization recognized by the government in 1991—ran a campaign aimed at forcing politicians to state their positions regarding sexual diversity, a practice now repeated before every election. As political will to address transgender injustices started to increase, the republic began passing laws on sexual education and education inequality, raising further public awareness about the need for gender equality and trans-inclusive data collection.

[5] In Canada, it was less apparent that a particular activist organization or body of research had a significant impact on increasing social and cultural recognition of transgender rights and health disparities.

From England and Wales. In the UK, advocacy organizations gained the ability to challenge U.K. laws in European courts when the UK joined the European Economic Community in 1973 (Thane 2010). Advocacy organizations used this ability to support laws to protect trans and non-binary people, such as the Sex Discrimination (Gender Reassignment) Regulations in 1999, which prevented discrimination against transgender people undergoing medically supervised transition in the workplace and vocational training. In the UK, the government also contributed to raising awareness about transgender rights through research: the House of Commons supported the Transgender Equality Inquiry, which highlighted critical health disparities faced by the transgender and non-binary population. The inquiry noted that transgender people experience worse health than the general population due to the direct and indirect effects of the discrimination experienced by transgender people. One year later, the ONS committed for the first time to developing a more inclusive gender measure for the census.

Recommendation. There has been substantial activism and research about transgender rights and health disparities in the United States, but advocacy and generated evidence has been unable to fully surmount the entrenched polarization in public opinion about transgender rights. However, the U.S. LGBTQIA+ civil rights movement has made huge strides in social acceptance and public opinion acceptance of LGBTQIA+ people. As more states recognized same-sex marriage, social acceptance of gay, lesbian, and bisexual identities increased as well. In 1996 when DOMA passed, only 27 percent of Americans supported legalizing same-sex marriage but now a record high 71 percent of Americans support same-sex marriage (McCarthy 2023). Continuing advocacy efforts to increase visibility of the transgender population in the United States could follow a trajectory similar to same-sex marriage advocacy. This could serve to increase social acceptance, mitigate polarization, and lead to a shift in public and political opinion toward more gender-inclusive public policies and increase the demand for data regarding transgender and non-binary people. State and federal level government actors, trans organizations, and other nongovernmental actors should continue to work on increasing the trans population's visibility through sharing information and raising awareness about what it means to be transgender in the United States This visibility could continue to build positive changes in public and political opinion and lead to more gender-inclusive public policies.

National antidiscrimination law designating transgender and non-binary identity as a protected class. Unlike the U.S, national antidiscrimination laws in all three case study countries played a significant role in promoting transgender inclusion and equality, which has facilitated including gender identity census measures.

From Argentina. In Argentina, various public entities (universities, hospitals, police, and government officials) applied pressure to pass Argentina's Gender Identity Bill in 2012. The law provides legal recognition of a person's gender identity.

From Canada. Canada extended its national antidiscrimination laws to include gender identity and expression in 2017 through Bill C-16. The law explicitly codified gender expression and identity as protected.

From England and Wales. In the UK, transgender people secured major victories related to gender identity affirmation through the European Court of Human Rights, including the Gender Recognition Act of 2004, which enables people to have their acquired gender recognized legally, and the Equality Act of 2010, which made it illegal to discriminate based on gender reassignment in England, Scotland, and Wales. The political will needed to develop and implement these national gender identity protection laws is connected to the will to collect data to monitor whether these rights are being upheld.

Exhibit IV.2. Passage of key antidiscrimination protections in case study countries

Recommendation. As described in Chapter III, although some U.S. states have made significant progress toward LGBTQIA+ civil rights, no federal law designates transgender identity as a protected class. A federal mandate designating transgender identity as a protected class—such as the 2023 Equality Act currently before Congress—could catalyze a shift in political will and policy toward collecting more gender-inclusive data in the next census.

LGBTQIA+ government bodies and political champions create a conducive political environment. Both Argentina and Canada created a specific government entity or body focused on LGBTQIA+ inclusion;[6] in Argentina a transgender political champion led this effort.

From Argentina. Argentina established the Ministry of Women, Gender and Diversity in 2019 to oversee public policies on issues affecting women and LGBTTIQ+ people. Alba Rueda, a prolific advocate for the rights of transgender women, was appointed the Undersecretary of Diversity Policies, making her the first openly transgender woman to hold a senior executive position in the Argentinian government. In 2022, Rueda then became the lead of the Office of Special Representation on Sexual Orientation and Gender Identity within the Ministry of Foreign Affairs, International Trade, and Worship, a new office created to support the Ministry in representing Argentina before international organizations and forums on issues related to gender, diversity, and the rights of LGBTTIQ+ people. Argentina was just the fifth country in the world to establish such an office.

From Canada. Similarly, the Canadian government created the 2SLGBTQI+ Secretariat in 2017 to strengthen diversity and inclusion, promote 2SLGBTQI+ equality, protect the rights of members of this community, and fight discrimination. The following year, it launched the Centre for Gender,

> "It is critical to engage transgender advocacy organizations in the design, development, and testing of gender-identity measures to successfully implement gender-inclusive questions [on population-based surveys]."
>
> Key informant, Argentina

[6] The UK has not yet established a specific working group or body focused on LGBTQIA+ rights at the national level.

Diversity, and Inclusion statistics to develop a Gender-Based Analysis Plus data hub to support evidence-based policy- and decision-making in government.

Recommendation. In the United States, greater transgender representation and champions among the leadership of government entities could help develop and implement gender-inclusive measures in the national census. In 2021, Rachel Levine became the first openly transgender federal official confirmed by the U.S. Senate. It remains to be seen whether more gender diversity in representation will translate to collecting more transgender-inclusive data.

A Census working group and public feedback dedicated to developing and implementing a gender measure. The census bureaus in all three case study countries created a specific working group or explicitly solicited public feedback around creating a more inclusive gender measure.

From Canada. In Canada, about the same time that antidiscrimination protections expanded to include gender identity and expression, Statistics Canada received requests from policymakers, researchers, and the public for more accurate data on gender. These requests, and general dissatisfaction expressed by Canadians about the question on sex, prompted the previous director of the Center of Demography to convene a working group across multiple divisions and with external partners to improve measures of sex and gender on the next census.

From England and Wales. Similarly, in the UK, the ONS received significant public feedback on the issue of a gender identity measure in response to the 2015 census. Afterward, the ONS began assessing the legal framework, data user requirements, potential methodological constraints, and possible updates related to more inclusive gender data and its collection. The ONS established a gender identity working group in May 2016 "to work with stakeholders and identify user needs for gender identity estimates" and hosted a gender identity workshop in August 2016 "to gain further understanding and clarity around concepts, terminology and information needs on gender identity" (ONS 2020).

From Argentina. Although Argentina did not establish a specific working group within INDEC focused on LGBTTIQ+ inclusion, the 2022 census preparatory stages included representatives from various ministries and other statistical entities. This body held meetings with INDEC to discuss the need for gender-inclusive measures and reached a decision to incorporate gender identity in the census.

Recommendation. Although the United States is making good progress toward including gender identity on the 2030 Census, it could benefit from establishing a specific body or working group focused on the task.

B. Measure design, testing, and analysis

As described in Section III, the U.S. Census Bureau already has experience developing, testing, and implementing gender-inclusive questions in population-based surveys; however, several challenges remain that applicable lessons learned from case study countries could inform.

Empirical validation of a two-step measure through response analysis. The three case study countries use a two-step measure for gender identity. Each case study country prioritized data

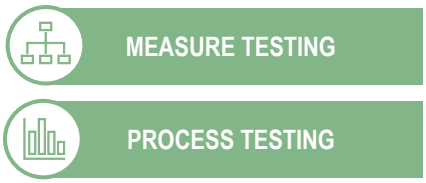
comparability with past census results by ensuring they still collected binary sex data in addition to a gender identity question. Each country also refined and validated the measures through analysis of responses in pilots and/or the full census.

From Argentina. INDEC conducted multiple pilot tests to arrive at a two-step measure. It also determined that including both variables of sex assigned at birth and gender identity was vital for calculating fertility; monitoring population indicators; and assessing disparities in areas such as labor market outcomes, education, and health care coverage.

From Canada. Statistics Canada implemented a two-step measure, providing response options such as "male," "female," or a third write-in option, effectively accommodating transgender and non-binary respondents while maintaining clarity for the cisgender population. The measure coded write-in responses by combining machine learning and manual coding, primarily differentiating them as non-binary or not. The machine learning model underwent testing, iteratively refining its accuracy through manual review.

From England and Wales. The ONS also incorporated a write-in option for the two-step gender measure because of thorough testing. In presenting the data, the ONS employed machine learning techniques for coding.

Recommendation. The United States should consider empirical validation through an analysis of response rates to assess its potential impact when testing a two-step measure. It might be advisable for the United States to test and explore a write-in option that aligns with the inclusivity criteria and can be effectively processed using machine learning techniques. However, a pivotal question emerges: should the gender identity question immediately follow the sex question or find placement later within the Census questionnaire? Another critical consideration for the United States is the number of response options for the gender identity question. This requires finding a delicate equilibrium between ensuring simplicity for respondents to comprehend and simultaneously avoiding excluding people who do not identify with the provided options. In addition, the question's design must consider the ease of subsequent data coding and analysis.



Limiting the gender identity measure and/or public data analysis to adults or older youth. The approach to imposing age thresholds for asking gender identity questions on the census varied across case study countries. Inclusion and accuracy in representing the entire population drove the decision to not have an age threshold in two countries (Canada and England and Wales), but methodological and consent considerations steered these countries into limiting the analyses of these data to certain age groups.

From Argentina. Initially, INDEC suggested directing the gender question to Argentinians ages 14 and older because of some discomfort from data collection staff in pilot tests. However, INDEC reconsidered because that directive would exclude a significant portion of the population. Instead, the census presented both questions to all respondents without age limitations.

From Canada. Despite not imposing an age restriction in the questionnaire, Statistics Canada prioritized analyzing the socioeconomic demographics of transgender and non-binary respondents ages 15 and older.

From England and Wales. The ONS elected to ask the gender identity question to individuals ages 16 and older. However, some health care providers serving transgender youth in England and Wales have raised concerns that not collecting gender identity data from youth on the census will only reinforce the exclusion of transgender youth from conversations about access to gender-affirming health care.

Recommendation. To strike a balance between understanding diversity and protecting minors' privacy, the United States should consider limiting the gender identity measure to older youth on the Census. The Census Bureau could align its strategy with the YRBSS and ask about gender identity of youth ages 13 or older. Another potential strategy could be to only release information about those ages 15 or older, as the Bureau plans to do for the SOGI measure it will test on the ACS survey in 2024. If adding a more gender-inclusive question about youth, the Bureau should conduct testing and piloting to assess the appropriateness of a gender identity question's wording and ensure the response categories are responsive to the language youth prefer to describe their gender. Incorporating a gender identity question for younger ages can offer valuable insights into societal diversity, support targeted policy formulation (particularly around health care), and ensure appropriate distribution of resources. Doing so also promotes inclusivity and recognition of different gender experiences in youth. However, including a gender identity question for younger people could raise privacy and parental consent concerns. The Census Bureau should communicate information to the public about its privacy safeguards for youth and why this information is important to gather to assuage these concerns.

Measure testing in common languages. Each case study country conducted robust tests customized to the language needs of their respondents.

From Argentina. The census bureau conducted sensitivity tests of the two-step measure (in Spanish). These revealed that respondents did not show any resistance and appropriately responded to the measures.

From Canada. Statistics Canada conducted pilot testing of the questions in English and French to improve translation accuracy. The testing phase clarified the appropriate terminology for both language versions to prevent confusion. To help census workers respond to queries from census-takers, Statistics Canada established standardized answers to common questions.

From England and Wales. The ONS engaged an external agency equipped with Welsh-speaking researchers to perform qualitative research and assess public understanding and acceptance of gender identity questions in Welsh. These tests revealed that none of the participants identified as transgender and the resemblance between Welsh terms for sex and gender posed challenges in formulating the questions. However, the ONS added no further explanation of gender to the questionnaire as it determined doing so would not affect the respondents' ability to answer the question correctly.

Recommendation. The United States should continue testing gender identity measures in Spanish and the other languages commonly spoken in the country, with a focus on addressing cultural comprehension barriers and terminology concerns. Because the Bureau administers the Census in 12 different languages, U.S. agencies could consider consulting with organizations representing diverse cultural and linguistic transgender communities, expert translation services, and other countries' census bureaus for feedback on potential measures. Finally, the United States could consider creating a comprehensive guideline for

defining sex- and gender-related terms in multiple languages for Census Bureau staff to use while collecting data.

Quantitative testing of the gender identity measure during proxy response. Not all case study countries use proxy reporting on their census. Those that do have either not fully resolved challenges with this approach or did not perceive proxy response as a challenge.

From Argentina. Proxy response on the census is not common in Argentina. Census Day is a national holiday, which encourages people to be at home to ensure every member of the household can actively participate in responding to the questionnaire. Those younger than 13 are encouraged to respond independently but can receive assistance from an older household member. Between the ages of 13 and 16, youth are encouraged to respond independently, provided there is no health risk involved. Those ages 16 and older are always expected to respond independently to the census questionnaire.

From Canada. Canada follows a similar practice as the United States, whereby census respondents are enumerated by place of residence during the census year and one person completes the census form for all persons residing in a private residence. Canada does not track the proportion of responses reported by a proxy. Gender reported by proxy is treated the same way as self-reported gender by Statistics Canada when analyzing and disseminating census data. Statistics Canada KIIs indicated that proxy reporting of gender was not perceived as a challenge when adding gender identity to the census.

From England and Wales. Although the ONS conducted quantitative tests aiming to assess the effects of proxy respondents, the use of proxy respondents for gender identity and sexual orientation questions remains a challenge. Proxy respondents sometimes lack accurate knowledge or provide untruthful answers due to bias or fear. During testing, respondents received guidance that if they were answering for someone else: "… where possible you should ask them how they want to answer. If they're away, select the answer you think they would choose." Proxy respondents completed about 30 percent of 2021 census responses, an issue the ONS is aware of but has not fully resolved.

Recommendation. The United States could conduct quantitative testing of the acceptability and reliability of a gender identity measure during proxy response. Quantitative testing, such as an ACS test, will provide the United States with otherwise unavailable critical data to ensure gender identity measures do not incur a disproportionate amount of measurement error from proxy responses. The United States could also consider providing specific guidance when a resident answers on behalf of someone else, similar to that used by the ONS.

ANALYSIS

Aggregating public gender data at broader geographic levels. Census respondents might have concerns about privacy and data protection when disclosing gender identity information, particularly if they are part of multiple marginalized groups. In data analysis, small transgender population sizes pose a challenge for balancing confidentiality and data disaggregation. All three case study countries shared similar data privacy concerns as the United States. The main strategy they used to protect transgender people's identity included consolidating gender and age categories at finer local and regional levels.

From Argentina. Argentina had not yet published results from the 2022 census at the time of this brief. In Argentina, privacy concerns might deter INDEC from publishing gender identity data at provincial and

municipal levels if doing so could risk compromising the anonymity of vulnerable people, despite the data's value for policymakers.

From Canada. Statistics Canada aimed for transparency and accessibility of gender identity data while safeguarding respondents' confidentiality given the relatively small transgender and non-binary population in Canada. To balance these considerations, the organization presented data on transgender and non-binary individuals only at broader geographical levels. It employs the terms *men+* and *women+* to categorize respondents at geographical levels below census metropolitan areas, encompassing transgender, cisgender, and some non-binary people. For even lower levels of geography, it uses the binary male and female categories. In addition, when disaggregating data by age, the organization adopted two broad age groups (15 to 34 and older than 35) to account for small cell sizes and confidentiality concerns.

From England and Wales. Initial reports from the ONS provided gender identity figures by country, area, local authorities, age, and sex and ensured data confidentiality by offering reduced detail at lower geographical levels, such as output areas (the lowest level of geography used in the census).

Recommendation. The United States should continue its standard practice to not report data below a specific sample size threshold for any new gender identity measure. In addition, applying demographic or geographic aggregation techniques, such as presenting gender-identity data at the state or regional level or by broad age ranges like those used in Canada, might help reduce the risk of personal identification. The United States has standard procedures to ensure data security. Communicating this effectively to respondents could help assuage their fears about the disclosure of sensitive information. The United States should consider working with LGBTQIA+ advocacy groups to communicate with transgender and non-binary communities and should train enumerators to effectively communicate confidentiality policies to respondents.

C. Health and SDOH benefits

Although observing the full impact of updating the three case study censuses to be more gender inclusive on health outcomes will require more time, there are some early benefits and a growing evidence base for anticipated benefits. This section outlines these benefits in the chronological order one would expect them to occur.

Improved survey experience for transgender respondents. Improving the survey experience for the transgender population will be an immediate benefit, whereas other benefits of updating the Census could appear years later following the deployment of the new instrument. This benefit is specifically relevant for the non-binary population who previously had only male and female response options and felt unseen and unrepresented.

From Canada. Early respondent feedback from Canada's inclusion of a new gender measure showed positive feedback from some transgender and non-binary people that it improved their survey experience. Statistics Canada analyzed comments received from people responding to the census and calling the census help line. Some transgender and non-binary people mentioned that updating the sex assigned at birth and gender questions acknowledges the diversity of gender identities that exist in Canada. Some

hoped that organizations relying on data to inform their programs and strategies will be motivated to improve policies and programming for transgender and non-binary populations. However, a few transgender or non-binary respondents were offended by sex at birth being asked, saying it was "dated" or "transphobic." Some would have preferred being asked only about gender identity rather than the agency inferring identity using the responses to sex assigned at birth and gender identity. Statistics Canada is analyzing these comments as it works to update the gender and sex at birth questions.

Increased visibility signals affirmation of gender identities, shifts norms, and strengthens enablers for further progress

Increased visibility of transgender identities can shift norms and strengthen enablers for further progress for transgender rights, health, and well-being. Updating the national census provides strong validation of transgender and non-binary identities, which the census previously excluded. Gender identity questions strongly signal that identities beyond binary male and female response options are valid, legitimate, and worth counting in the most thorough and comprehensive national-level data collection effort. In the three case study countries, significant media coverage occurred in anticipation of the new statistical standards; researchers, nongovernmental organizations, and decision makers showed particular interest.

From Canada. Canada used social media, specifically reddit, as a platform for Canadians to ask questions of and celebrate the new measures and resulting data. Moreover, several prominent health and sociology researchers have used social media and news platforms to discuss the new measures and express an eagerness to work with the data.

From England and Wales. In the UK, the media and and by numerous charities and LGBTQIA+ organizations celebrated the inclusion of the new gender measure in the census. These media reports emphasized that the government can and should use new data to improve support for LGBTQIA+ people, including in health policies and programs.

From Argentina. In Argentina, updating the census coincided with efforts to raise public awareness of gender diversity by passing laws that promote understandings of gender, sex, and equality in education. These efforts fostered a more gender-inclusive Argentinean society. For example, awareness about the need for transpeople's data motivated the Ministry of Health to offer training courses and publish clear guidelines to avoid institutional violence in the care of trans children and adolescents. The ministry also published a document outlining the medical consensus on the use of puberty blockers and hormone replacement therapy.

Improved design/ tailoring of health programs

Improved health program design to better serve transgender people. The ONS and Statistics Canada have made, to varying degrees, the sex assigned at birth and gender identity data available. Based on the enthusiasm from researchers, the agencies are likely to use the data for analysis for improved health program design. There are, however, concerns about quality issues with the data from England and Wales that might lead to an overestimation of the number of transgender respondents, due to some cisgender respondents, specifically non-native English speakers, who might not have adequately comprehended the question. In Argentina, INDEC has promised to release a gender identity report; these data will serve as an input for planning, improving, and

understanding the impact of public health policies focusing on transgender people, such as the 2012 gender identity law that made gender-affirming care a legal right and ensured free health care to transgender youth and adults in public hospitals.

Improved SDOH and health outcomes for transgender people. Understanding the impact that updating census instruments to be more gender inclusive has on the SDOH and health outcomes for transgender people will require more time. That said, the information gathered from news clips, advocacy organizations, academics, policymakers, and U.S. Census staff show that the goal of updating the Census was to use the data to improve policy, which will in turn improve the SDOH and outcomes for transgender people.

V. Conclusion

Collecting high-quality data on the transgender and non-binary population is a socially and methodologically complex task, but one that is highly beneficial. Updating the Census and other population-based surveys to be more gender inclusive can ensure everyone is counted. These data can help identify and understand disparities and propel systemic change, whereas their absence leaves these disparities to stagnate and potentially widen. A key to implementing more gender-inclusive measures includes activism and research that promote public recognition of the disparities faced by transgender and non-binary people. National laws protecting transgender and non-binary people and upholding their rights also created a clear need for national governments to collect gender identity data. In at least two of the case study countries, dedicated executive entities established to champion LGBTQIA+ rights at the national level provided motivation for incorporating more gender-inclusive measures in the census. To support the development of accurate and gender-inclusive measures, census agencies in all three countries solicited public feedback, hosted consultations with data users and the transgender community, and/or established working groups with a specific mandate to investigate gender identity measures. These countries provide an example to the United States on how to overcome political polarization and methodological issues. Including more gender-inclusive questions in the U.S. Census has the potential to catalyze improvements to the well-being of transgender and non-binary people. This population comprises about one in 20 Americans younger than 30.

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Appendix A

Methods and Analytical Approach

A. Case study selection

Mathematica purposively selected the three cases—**Argentina**, **Canada**, and **England and Wales**—for this study given their alignment with the following criteria, which make them relevant to the United States (U.S.) context:[7]

- Success in implementing a more inclusive gender measure in the latest census (2021 and 2022)
- Rich information on the development of the new statistical standards made publicly available by the various census agencies (providing specific learning opportunities regarding the methodological process to measure the design and testing, implementation, and data analysis)
- Relevant cultural and/or political context to the U.S (providing learnings about the key enablers to implementing a more gender-inclusive measure)
- Relevant languages (providing learnings around question wording and translation)

B. Data sources

We used three related qualitative data sources for our within- and cross-case analyses: a historical and political literature review, methodological review, and key informant interviews (KIIs) (**Exhibit A.1**.). Each of these sources enabled us to draw insights linked to specific aspects of our theory of change (ToC).

Exhibit A.1. Data sources, methods, and link to ToC

Data collection method	Data sources	Link to ToC			
		Enablers	Inputs (design and testing)	Outputs (implementation and analysis)	Outcomes
Literature review	Journal articles, media reports, grey literature, U.S. Census Bureau reports	✓			✓
Methodological review	Census methodological reports		✓	✓	
Primary data collection	Key informant interviews (KIIs)	✓	✓	✓	✓

Historical and political literature review. To understand the historical and sociopolitical contexts around gender norms in the selected case-study countries (that is, the key enablers of implementing a more inclusive gender measure), we reviewed media reports and grey literature (newspaper and magazine articles, television and radio reports, and other digital media); published journal and academic articles and books; and government reports and Census Bureau releases. We primarily used Google Scholar, Google search, and Google News search. We identified literature focused on the history of gender norms and

[7] We considered two other countries to include in the study (Nepal and New Zealand); however, because they had not implemented gender identity measures on their national census at the time of our within-case analysis and we wanted to focus on a smaller number of case studies to generate rich depth of information about each case, we decided not to include them in the study.

identities in each country; the ways in which transgender rights activism has interacted with broader activism around lesbian, gay, bisexual, transgender, queer, intersex, asexual, plus other identities (LGBTQIA+) rights; and the sociopolitical context that made possible updating the censuses to be more gender inclusive. Search terms included [country name] + history of gender; transgender rights; implement gender-inclusive measures; gender-identity questions in population-based surveys; gender-identity questions in census; gender-identity questions challenges; and gender-identity questions benefits[8]. We drew on these same sources to assess whether the key outcomes hypothesized in the ToC related to health and social determinants of health had yet materialized in each case study country. The search terms for this were [country name] + gender data + [year] census; health impacts; health effects; and national health service. We adjusted and customized these terms for each country as the review progressed. In total, we reviewed 80 sources.

Methodological review. To understand how each country's census has approached the design and testing of a gender measure, as well as analysis, we reviewed documents and data published by national and regional censuses on their websites. This included reviewing design plans, methodological reports, and other relevant documentation on gender identity questions in each national census, as well as from non-census population-based surveys commonly used for health purposes. In our review, we focused on three factors:

1. Each country's census questions used to identify gender and sex, which included question phrasing, response options, and skip conditions
2. The steps taken to design and test questions to arrive at statistical standards
3. How the data have been disaggregated and analyzed, to shed light on opportunities to promote health for transgender and non-binary populations

KIIs. To gather specific and in-depth information about each component of our ToC and inform U.S. strategy, we conducted 14 total KIIs (**Exhibit A.2**), including people in the national statistical bureau of each country who were either responsible for implementing the census or involved with developing gender-inclusive questions and/or related statistical standards, people in other health-focused U.S. bureaus or agencies that are responsible for implementing key health surveys, and key U.S. LGBTQIA+ advocacy groups.

Exhibit A.2. KIIs, by country

Country	Total # KIIs	# KIIs per agency/org	Agencies and organizations
Canada	3	1	Center of Demography at Statistics Canada
		2	Center for Gender Diversity and Inclusion Statistics at Statistics Canada
Argentina	1[a]	1	Office of the Special Representation on Sexual Orientation and Gender Identity
England and Wales	0[b]		

[8] We translated the terms into Spanish before conducting literature search for the Argentina case study.

Country	Total # KIIs	# KIIs per agency/org	Agencies and organizations
United States	10	3	United States Census Bureau
		1	Centers for Disease Control and Prevention (CDC), National Center for Health Statistics (NCHS)[c]
		3	CDC, National Center for Chronic Disease Prevention and Health Promotion[d]
		3	LGBTQIA+ advocacy group[e]

[a] We were unable to connect with current staff members at the National Institute of Statistics and Census of Argentina (INDEC).

[b] Although we had early conversations with the Office of National Statistics (ONS) in the United Kingdom, we were not able to contact the agency after January 2023 for a KII, likely due to political sensitivity surrounding legislation in 2022 about gender identity recognition. In the absence of a formal KII, we have relied on very detailed methodological reports from ONS for our analysis.

[c] The NCHS administers most key health surveys administered by the CDC, including the National Health and Nutrition Examination Survey, the National Survey of Family Growth, the National Health Interview Survey, and the Research and Development Survey.

[d] This interview discussed the Behavioral Risk Factor Surveillance System (BRFSS) with key staff at the National Center for Chronic Disease Prevention and Promotion, which implements the BRFSS.

[e] We have kept the names of the LGBTQIA+ advocacy groups confidential due to privacy concerns from individual respondents. These interviews were not recorded.

Based on participants' preferences, we either conducted two interviews per country or had a longer interview with several participants. Topics covered during the interviews included the impetus for including gender-inclusive questions in each country's census, survey design process, final measures and statistical standards used, data collection, and how the country disaggregated and analyzed data on gender. We also asked about their perceptions of the sociopolitical context around gender norms in each country and other contextual factors that have enabled or hindered implementation.

C. Analytic approach

We employed an analytic case analysis approach that combined the program effects within-case study typology and cumulative comparative case study typology (as classified by the Government Accountability Office [1990]), as described later.

a. Within-case analysis

For our descriptive within-case analysis, we employed the program effects typology to examine causality in each country (that is, which conditions resulted in the implementation of a more gender-inclusive census measure), following the five areas of our ToC. We examined which sociopolitical and legal enablers were present before the gender measure's inclusion (following the Kingdon [2010] model of problem recognition, political will, and policy change streams); we then assessed key activities or inputs that each country's census bureau undertook, including components of measure design and measure and process testing.

Next, we assessed the extent to which these enablers and inputs led to two outcomes:

- Successful implementation of the gender measure (as evidenced by the creation of a statistical standard, and implementation in the census and other population-based health surveys)
- Successful analysis of the new gender data; we employed the analytic method of pattern matching to compare the predicted cause–effect chain of events in the ToC with the empirically observed evidence in each case, and identified any variances or gaps, allowing for sensitivity to

alternative explanations as well as potential biases in the available evidence (Baškarada 2014; Government Accountability Office 1990).

To conduct this analysis, we developed a coding scheme that included qualitative codes (and subcodes) that aligned with the ToC, as well as cross-cutting codes such as motivations and challenges. For example, we included the following codes and subcodes under the enablers component of the ToC:

- Problem recognition:
  - Changing social norms around broader LGBTQIA+ rights and inclusion
  - Pressure from activist groups
  - Demand for high-level data from researchers in academia, nongovernmental organizations, the private sector, and so on
  - State- or provincial-level movements for transgender inclusion
- Political will:
  - Political champion
  - Legislative context: government control shifts to a political party with an LGBTQIA+ equality agenda
- Policy change:
  - Write-in feedback on previous censuses
  - Financial support to the statistical agency for question development

We then coded and analyzed each data source (including documents from the literature review, census reports, and transcripts from the KIIs) following that scheme, using a Microsoft Excel workbook. Finally, we triangulated findings across the data sources to highlight mechanisms, contexts, similarities and differences in perspectives. These analyses culminated in a descriptive case study report (**Appendixes B–D**) for each case study detailing which conditions were present and initial hypotheses on which configurations of conditions were critical to achieving the intended outcomes.

b. Cross case analysis

Our cross-case analysis employed a cumulative case study typology to synthesize findings across our three cases to answer our research questions (Government Accountability Office 1990). First, we analyzed the progress and key outstanding barriers or challenges in the United States to date along each area of the ToC. (For example, we analyzed the extent to which broad social and cultural recognition has been achieved that a lack of gender-inclusive measures is a problem in the United States We also identified outstanding challenges such as the polarization of trans rights, coupled with decentralization of legislative and regulatory policy at the state level.) Next, we synthesized key learnings and pinpointed cross-case patterns through pattern matching (Yin 2014) from the case study countries about how they approached similar challenges or barriers, to extract learnings relevant to the United States context. We used a similar Excel workbook to synthesize these findings across cases, as well as group brainstorming sessions using

the MURAL platform. When appropriate,[9] we synthesized these key learnings into qualitative data visualizations that illustrate the extent to which, or strength of, each condition's presence in each case study was a contributor to key outcomes (**Exhibit A.3** presents an example related to Research Question 2 of how each country used different elements of measure design, and measure and process testing, to translate its gender measure).[10]

Exhibit A.3. Example of cross-case synthesis workbook for outstanding barrier related to Research Question 2: How to translate gender measures so they are culturally and linguistically appropriate

			Argentina	Canada	England and Wales	United States
# of languages new gender measure was translated into			#	#	#	N.A.
Number and/or relative importance of each component of the ToC in successful translation of the gender measure	**Design**	Advocacy groups consulted	# groups (critical importance)	# groups (moderate importance)	# groups (low importance)	
		Methodological reporting and review				
	Measure testing	Focus groups conducted				
		Cognitive interviews conducted				
	Process testing	Field and sensitivity tests				
		Subgroup or subnational tests				

N.A. = not available. [use n.a. = not applicable.]

D. Risks and limitations of our design

We minimized risk regarding the generalization of results from a small number of (complex) case studies via thoughtful, purposive case selection. We elected to research fewer case studies to generate rich and deep information about each case, through more intensive data collection and analysis (as opposed to a larger number of cases, which would provide quantity but limited information collection around the themes within the project resources). Qualitative case study methodology enables researchers

[9] It is not always appropriate to quantify qualitative data even as continual or categorical variables due to the risks of researcher bias and subjectivity. For example, we felt it was not appropriate to take this approach to Research Question 1 (for example, by categorizing the presence of sufficient political will in each country as relatively significant, moderate, or lacking given the inherent subjective nature of such an analysis.

[10] Note that we considered conducting qualitative comparative analysis for this study but determined it was not the best approach for this context given the limited number of cases (the approach is more appropriate when analyzing large numbers of case studies).

to study complex phenomena within their contexts, but there are limitations to analyzing small numbers of cases (Willis 2014). The potential for generalization might exist, but the case study approach is more suitable for exploring empirically rich, context-specific, holistic accounts of the case studies and their contribution to theory-building and, to a lesser extent, that of theory-testing. We purposively selected three case study countries where the approach to incorporating a more inclusive gender measure on the census proved successful (following the selection criteria described earlier); however, other countries might have fulfilled the same favorable conditions or enablers, without the same success. Similarly, it is likely other countries adopted different approaches that have proved successful.

We compensate for a lack of primary data collection in the UK by enhancing our secondary data collection. As discussed, we targeted conversations with high-level census officials on a very sensitive and evolving topic and, as a result, were not able to secure interviews with staff at the ONS in the UK However, we accessed rich information for our analysis through publicly available methodological reports, data, media reports, and other secondary data sources.

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Appendix B. Case Study: Argentina

Implementing a more gender-inclusive measure in the 2022 census

Case study road map

Introduction and key findings

The 2022 Argentinian census, implemented by the National Institute of Statistics and Censuses (INDEC), included updated questions for sex and gender identity. This milestone formally recognizes gender diversity in the country and acknowledges that counting the trans population as a key mechanism for understanding outcomes and needs of this population. Although INDEC has yet to release data from the gender identity variable at the time of this report, it plans to publish a specific report on gender identity. The strategies INDEC deployed to develop and implement the more gender-inclusive measure in the census can provide important learnings to the United States (U.S.) about why and how to incorporate gender-inclusive questions in broad population-based surveys (summarized in **Exhibit B.1**).

Exhibit B.1. Summary of key findings from Argentina relevant to the United States

Strong transgender rights activism motivated Argentina's success in implementing the new gender identity measure in the 2022 census, as did transgender engagement and representation in the census bureau and key government agencies. The United States can also take note of the Argentinian experience with testing and refining the new measure at a subnational level, which facilitated adoption of the measure at the national level when the policy window opened.

- **Decades of trans advocacy organization work** facilitated a shift in cultural norms, and helped secure legal victories that paved the way for the adoption of a more gender-inclusive measure in the Argentinian census. For example, the shift in social norms brought additional support from public entities (universities, hospitals, police, and government officials), ultimately resulting in the passage of Argentina's Gender Identity Bill in 2012.
- **Greater lesbiana, gay, bisexual, transgénero, transexual/travesti, intersexual, queer, plus other identities (LGBTTIQ+) visibility and more data on the health and other injustices** faced by trans people fueled a growing demand for a comprehensive count of the trans population through the census. For example, the data collection efforts with the trans population led by activist organizations in the early 2000s and the resulting data provided the first evidence for the necessity to collect gender-inclusive data at the state and federal levels.
- **State-sponsored data collection efforts** provided key methodological information used to construct the national sex at birth and gender identity measures for the census pilot test in 2019. After the passing of the Gender Identity Bill in 2012, INDEC conducted three province-level surveys and one in Buenos Aires to pilot the new measure. INDEC used the resulting information to refine the measures for the 2019 national census pilot test. For example, it considered the request to include separate categories for trans man and woman.
- **Public awareness campaigns, enumerator training,** and putting the questions into operation facilitated smooth implementation of the 2022 census. Qualitative observation by INDEC during the 2019 census pilot test revealed challenges in question administration for both enumerators and respondents, which led to three action items: (1) conduct awareness raising campaigns about the new gender identity measure to minimize refusals to respond; (2) train the census enumerators on administering the measure; and (3) improve the implementation the measure, including by reading response categories aloud, noting explicitly on the form that sex refers to sex at birth.
- **Commitment of the Argentinian census bureau to publish a gender identity-specific report** from the 2022 census for federal and municipal governments will support use of the data to reinforce national and local policies and programming to improve the health and well-being of gender minorities.
- **Transgender engagement and representation in the census bureau and key government agencies.** Key informants recommended that the United States and other countries that wish to successfully implement gender-inclusive questions on population-based surveys should systematically engage local transgender organizations as key actors in the design, development, and testing of the gender-inclusive questions, and ensure there is transgender and non-binary representation in government bodies to advocate for counting the trans population to lead to more transgender-inclusive public health policies.

1. Sociopolitical and Legal Enablers to Implementing New Gender Identity Measures in Argentina's Census

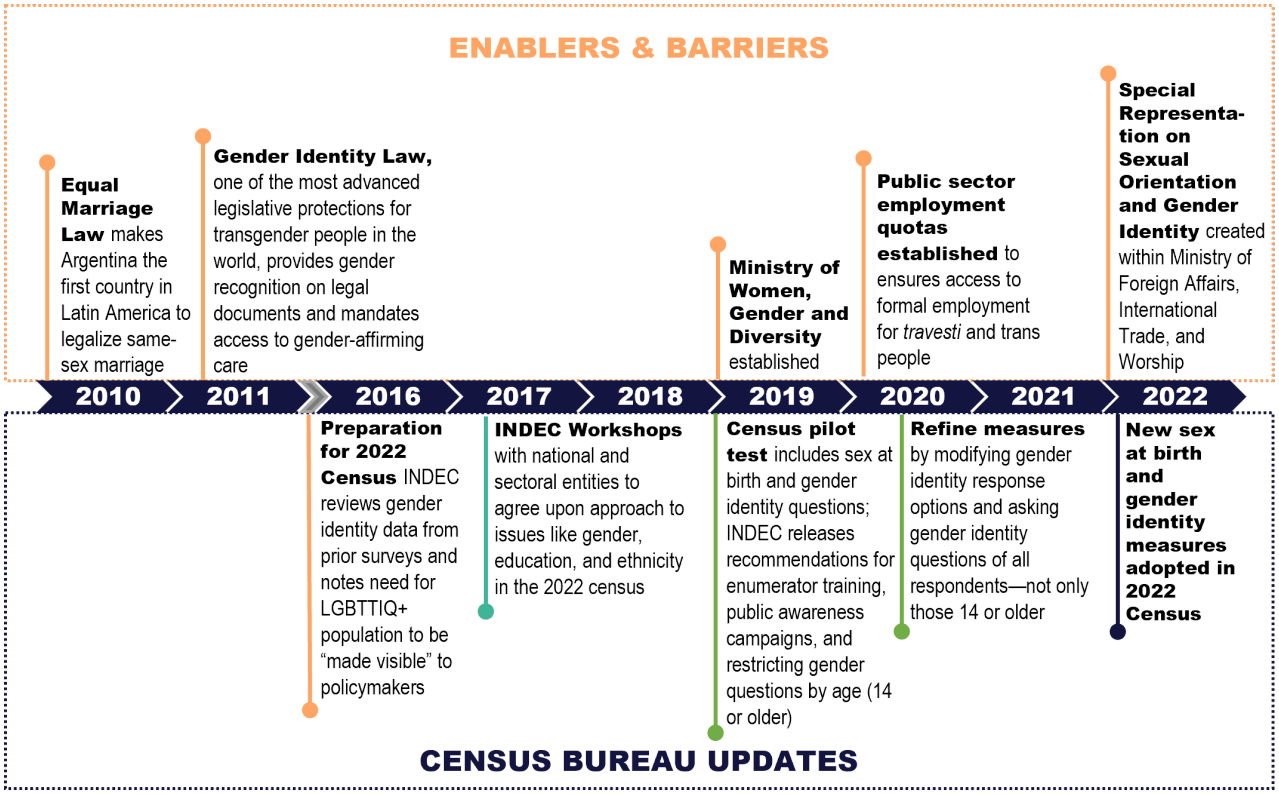
a. Problem recognition and political will

RECOGNITION OF PROBLEM

POLITICAL WILL

Argentinian LGBTTIQ+ rights activists have played a critical role in elevating the discrimination faced by LGBTTIQ+ people as a key issue and bringing it to the nation's political consciousness, which has paved the way for a greater level of social acceptance, civil rights, and, ultimately, legal recognition for LGBTTIQ+ Argentinians. Since the 1990s, the work of activists and advocacy organizations has helped secure greater legal and judicial protections for LGBTTIQ+ people, highlighted the disparities they face, and garnered wider public acceptance for gender and sexual diversity. The tireless efforts of these advocacy organizations also spurred the government and nongovernmental organizations to promote diversity and gender equality in national policy and international relations. Several key legal, political, and cultural events set the stage for INDEC to evolve the gender identity measure in the census **(Exhibit B.2)**.

Exhibit B.2. Timeline illustrating key modern legislative and historical events related to transgender rights, as well as key updates to the census



Creating momentum and awareness to support civil liberties of LBGTTIQ+ people. Following the end of Argentina's civil–military dictatorship in the 1980s and with the restoration of democracy, civil society organizations championing LBGTTIQ+ rights became active in Buenos Aires (Pousadela 2013). The emergence of these civil society organizations coincided with a liberalization of practices and discourses related to sexuality and sexual diversity among the public (Moreno 2008). Through the 1980s and until the mid-1990s, LGBTTIQ+ advocacy organizations primarily advocated against homophobia, police violence, and stigmatization of people with HIV/AIDS. As time passed, LGBTTIQ+ groups began to focus on increasingly on broader recognition and rights for trans populations. A pivotal moment came in 1991, when the government formally recognized Argentine Homosexual Community (CHA)—Argentina's first sexual diversity organization—as a trans advocacy organization by the government. The multiyear battle for this recognition fueled public debate over homosexuality and paved the way for the formation of other advocacy groups (Brown 2002). Later in the 1990s, sexual diversity organizations began to multiply and spread beyond the city of Buenos Aires. During this time, organizations began to adopt the term *transgender*[1] to designate support and alliance with *travesti,*[2] transsexual and intersexual people.

Affirming LBGTTIQ+ identities. In 1993, the CHA ran a campaign aimed at forcing politicians to state their positions regarding sexual diversity, a practice now repeated before every election. In 1996, the CHA's antidiscrimination efforts were rewarded when Buenos Aires' Constituent Assembly established discrimination on the basis of sexual orientation as illegal and punishable by law; two years later, the Constituent Assembly abolished discriminatory police edicts[3] in the district (Pousadela 2013). Following these key milestones in Buenos Aires, the CHA and others sought broader recognition of trans people's rights across the country. In 2003, the Asociación de Lucha por la Identidad Travesti y Transexual (ALITT) began leading the campaign for social acceptance and legal recognition[4] of LGBTTIQ+ rights in Argentina. The campaign activities included holding celebrations of diversity; hosting demonstrations and cultural events; and emphasizing the alignment of LGBTTIQ+ organizational goals with those of feminist and other human rights organizations that denounce all forms of oppression, violence, and discrimination (Manca 2021). Due in part to this campaign, the Supreme Court of Justice released several rulings that made Argentina a global trailblazer in legally recognizing LGBTTIQ+ identities and protecting the rights of the LGBTTIQ+ population. In 2007, for example, the Supreme Court of Justice upheld the rights of a 17-year old transgender girl to receive gender-affirming surgery and change her legal sex, constituting the first institutional recognition of transgender youth's identities by the highest-ranking judicial body in Argentina (Public Ministry of Defense 2017).

Codifying LGBTTIQ+ rights into laws. As soon as the Argentinian Senate passed the Equal Marriage Law in 2010, LGBTTIQ+ activists shifted their attention toward supporting the passage of a Gender Identity Bill to codify the legal rights of trans people into law. In November 2010, the National Front for the Gender

[1] *Transgénero* is the Spanish term for transgender.

[2] The term *travesti* is used in Latin America to designate people who were assigned male at birth and develop a feminine gender identity.

[3] Police edicts stated that scandal was not allowed in the streets and police used them to stop (and arrest) people who looked gay (Pousadela 2013).

[4] Legal recognition of the right to receive gender-affirming surgery and change her legal sex and update the legal documents to reflect the identity change.

Identity Law, recently formed by the Federación LGBT Argentina (FALGBT) and several organizations, introduced a bill to the National Congress with the support of representatives from several parties. At the same time, two judges ordered the Argentinian government to provide a person with new papers with the gender identity of their choice without proof of any surgery or medical procedure. With these indicators of change, Congress began discussing the Gender Identity bill in 2011. The National Front's campaign for passing this bill brought additional expressions of support from universities, hospitals, and police. With wide-spread public support, the Gender Identity Law passed unanimously in the Senate in 2012 (INDEC 2019a). In addition to mandating that the government provide every citizen documents consistent with their gender identity, the law ensures that adults and minors can access gender-affirming medical care with no need for judicial or administrative authorizations through both the public system and private health insurance companies as part of the Compulsory Medical Plan (Pousadela 2013). The latter aspect makes this bill one of the most advanced in the world.

Exhibit B.3. Argentinian lawmakers used Yogyakarta Principles to define gender identity

After meeting in Yogyakarta (Indonesia) in 2006, a group of specialists in the field of diversity developed international human rights legislation in relation to sexual orientation and gender identity, which was called "The Yogyakarta Principles" (2007). Argentine law makers used these principles to define gender identity in the law.

According to the Yogyakarta Principles (2007), "**gender identity** is understood to refer to each person's deeply felt internal and individual experience of gender, which may or may not correspond with the sex assigned at birth, including the personal sense of the body (which may involve, if freely chosen, modification of bodily appearance or function by medical, surgical or other means) and other expressions of gender, including dress, speech and mannerisms."

Promoting implementation of the law. In the decade following the passage of the Gender Identity Law, LGBTTIQ+ activists have continued to advocate for the full implementation of the law, while also raising awareness of the disparities that transgender Argentinians continue to face. Immediately after the adoption of the Gender Identity Law, LGBTTIQ+ organizations advocated to increase the number of specialized professionals in public health structures and to implement policies guaranteeing labor inclusion and access to housing for transgender people (ONUSIDA 2013). Research from LGBTTIQ+ legal advocates has shown that transgender Argentinians continue to face difficulty securing formal employment, which leaves a disproportionate number living in poverty without access to health insurance and social security (AboSex 2018). These efforts raised awareness, both in government and among the public, of the need to address the continued disparities faced by transgender Argentinians.

Exhibit B.4. Continued discrimination faced by trans people even with the Gender Identity Law

Argentinians, particularly minors, seeking to change the gender marker on their birth certificates and identification cards have observed unjustified delays and obstacles due to discrimination at the offices of the civil registry in several jurisdictions. Access to consultation is limited by discriminatory and violent acts on public roads, unequal treatment by health personnel, and the lack of friendly clinics in many localities of the national territory. Many transgender people in Argentina continue to face medical discrimination and processing delays that prevent them from accessing the gender-affirming services to which they are legally entitled. The life expectancy of transgender people in Argentina is only 35 years, according to a report carried out in 2014 (Prieto 2020).

Transgender leadership and new representation in government has furthered the promotion of gender equality as an executive priority. In 2019, Argentina established the Ministry of Women, Gender and Diversity to oversee public policies on issues affecting women and gender and sexual minorities. Alba Rueda, a prolific advocate for the rights of transgender women, was appointed the Undersecretary of Diversity Policies, making her the first openly transgender woman to hold a senior executive position in the Argentinian government. In 2022, Ms. Rueda was then appointed to lead the Office of Special Representation on Sexual Orientation and Gender Identity (RSOGI) within the Ministry of Foreign Affairs, International Trade and Worship, a new office created to support the Ministry in representing Argentina before international organizations and forums on issues related to gender, diversity, and the rights of LGBTTIQ+ people (Ministry of Foreign Affairs, International Trade and Worship, n.d.). Argentina was just the fifth country in the world to establish such an office. As one key informant noted, the office also promotes the "generation, design, and classification of statistical evidence with government agencies and with activists and social organizations."

b. Policy change to develop a more inclusive gender measure for the census

Trans advocacy organizations have led efforts to collect more accurate data on both sexuality and gender—both in sample surveys of the trans community and in the census. However, the initial surveys had a non-probabilistic sampling design that meant the results might not be representative of the entire Argentinian trans population. These initial studies of the transgender population in Argentina along with the passage of the Equal Marriage Law provided impetus to collect gender-inclusive data. Various trans advocacy organizations and representatives, such as the National Institute against Discrimination, Xenophobia and Racism (INADI), Ms. Rueda, as well as others, met with INDEC and highlighted the need to (1) generate evidence for same-sex couples living together as well as those having children, (2) think about specific public policies for those couples, and (3) raise the visibility of the transgender population in Argentina.

Starting the policy change for gender-inclusive questions in the census. At the time of meetings with trans activists, INDEC was in the final stage of the 2010 census and could not include any new items. However, as a first step, INDEC eliminated a verification identifying same-sex head of households as a mistake in the response. This enabled INDEC to publish data on same-sex cohabiting couples (number of couples, their sex, and the percentage of couples that have children) in 2011.

Examining and implementing change for gender-inclusive questions. After the enactment of the Gender Identity Law and increasing demand for data on gender identity, efforts to collect standardized gender-inclusive data expanded and the Argentinian government began to assess whether it could measure gender identity as defined in both Yogyakarta and the new Gender Law in the next national population census planned for 2020[5] (INDEC 2019a). Following United Nations' suggestions for collecting data from the transgender population, INDEC consulted with transgender people on the conceptual, operational, and methodological design of the gender-inclusive questions (INDEC 2019a).

[5] INDEC planned to implement the decennial census in 2020; however, COVID-19 led to delays in the census development process, and it was implemented in 2022.

2. INDEC's Approach to Designing Gender Identity Questions for the Census

After the passage of the Gender Identity Law in Argentina, both the national government and several provinces recognized they did not have official statistics to develop public policies focused on the human rights of trans people (IPEC 2015). INDEC published census data on same-sex cohabiting couples in 2011, but because the census did not measure gender identity, it could not provide such data on the country's transgender population, leaving policymakers unequipped to meet their needs. Simultaneously, with the passage of the Gender Identity Law enacting a legal mandate for upholding the rights of transgender people, the political will to institute a change increased and government entities started to engage in consultations with INDEC regarding the addition of gender-inclusive measures in the census. During the preparatory stages of the 2022 census, representatives from various ministries—such as the Ministry of Social Development, the Ministry of Labor, the monitoring and evaluation departments of social programs, the sexual health department of the Ministry of Health and Social Development, the Ministry of Justice, and other statistical entities—held meetings with INDEC to discuss the need for gender-inclusive measures and reached a decision to incorporate gender identity in the census "so that this population is made visible through official statistical surveys resulting in more public policies that meet the needs of this group" (INDEC 2019a).

> "Because the categories of lesbian, *travesti*, trans, gay, bisexuals and intersexuals are not usually made explicit, the inclusion of variables that allow these groups to be identified in data collection operations not only fulfills an informative function, which makes it possible to monitor and improve their situation, but also ensures making visible subjects historically invisible."
>
> Mendive (2021)

To inform the development of these measures, INDEC began holding its first participatory consultations with LGBTTIQ+ activist organizations (FALGBT, CHA, ALITT, and others) before the 2022 census and discussed issues related to sexual diversity and equal rights (INDEC 2019a). In addition to participatory consultations with the transgender community and government entities, INDEC consulted methodological reports published by the ONS and the Australian statistical bureau that described in detail the design and testing process of the sex at birth and/or gender identity variables. Along with input from the transgender community, this research and other surveys in Argentina (**Exhibit B.5**) informed INDEC's design of more gender-inclusive questions in the census.

Exhibit B.6 presents the evolution of the sex and gender identity questions during the three previous census rounds (2001, 2010, and 2022).

Exhibit B.5. Key nonprobabilistic and probabilistic data collection efforts on the trans population in Argentina (2012-2017)

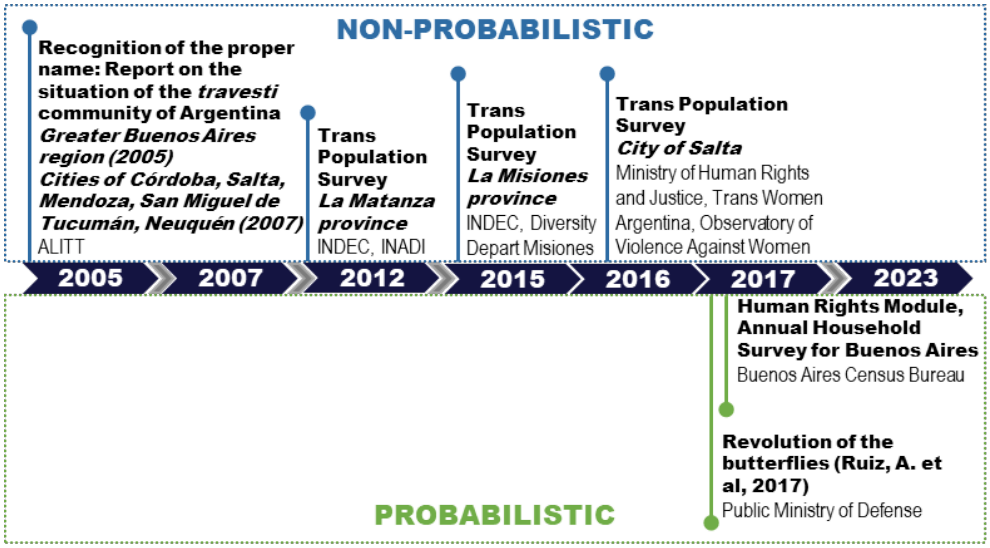
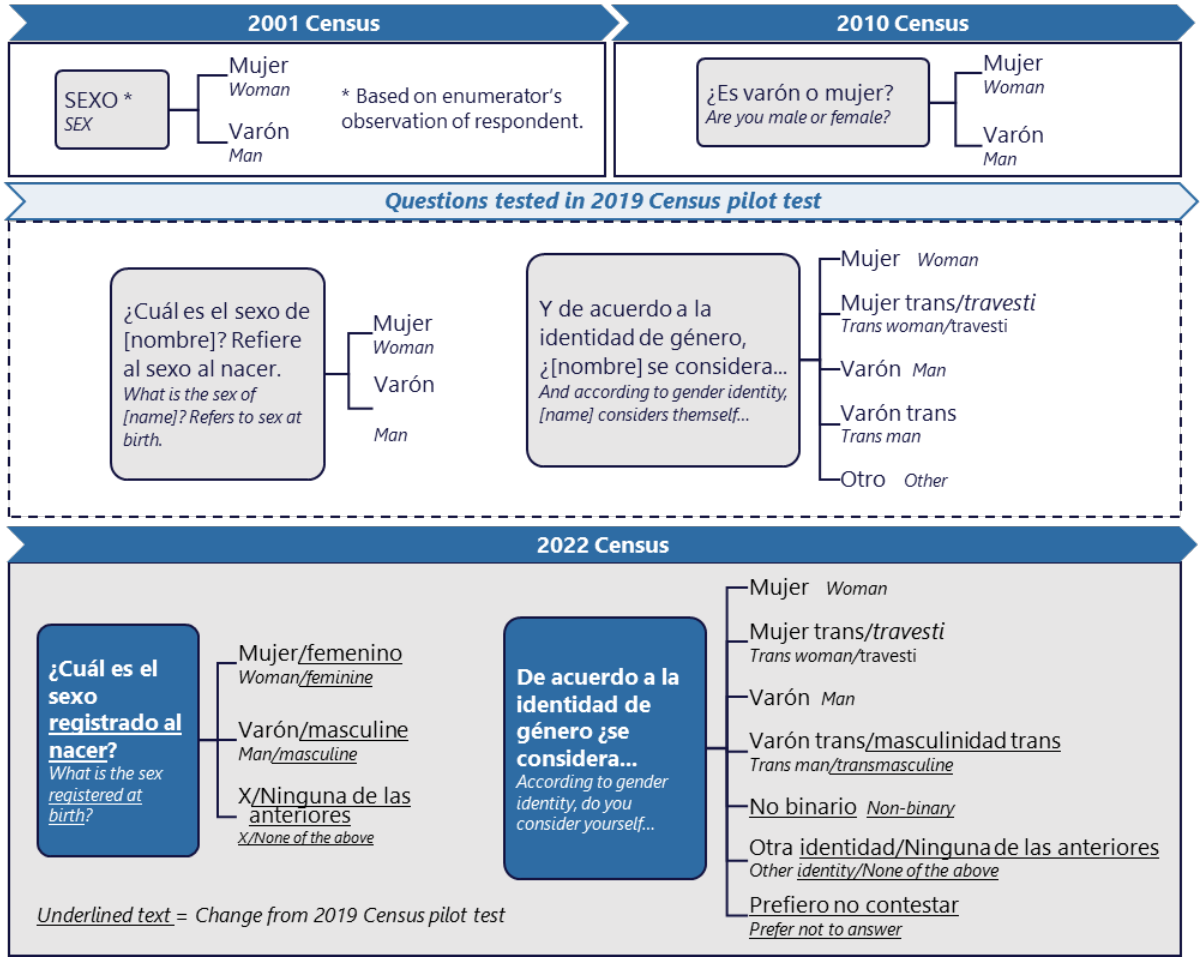
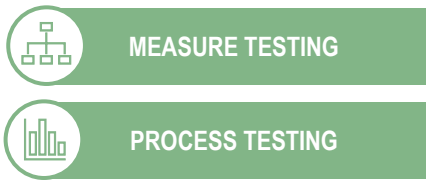


Exhibit B.6. Evolution of sex and gender identity questions and response options (2001 census, 2010 census, 2019 census pilot and 2022 census)



3. Testing More Gender-Inclusive Questions for Argentina's 2022 Census



This section offers insight into the types of quantitative and qualitative testing INDEC implemented to refine the new gender identity measures, including testing for cognitive resonance (measure testing) and effectiveness of fielding (process testing). We draw these insights from census bureau documentation.

Subnational surveys: developing a reliable two-step measure. In 2012, 2015, and 2016, INDEC conducted three Trans Population Surveys in several provinces, which enabled measure and process testing of the proposed new gender identity measures with both the transgender population and the broader public (**Exhibit B.5**). During these three pilot tests, INDEC and its partners aimed to develop measures of gender identity and sexual orientation that would facilitate collecting reliable data on sociodemographic characteristics of the trans population and that future population censuses could include (INDEC 2019a). These pilot tests provided important information about the gender identity measure and its response categories; for example, pilot participants recommended distinguishing transgender woman from transgender man instead of grouping them in one category. In addition, in 2017, INDEC and the Statistical Bureau of Buenos Aires piloted three new questions about sex assigned at birth, gender identity, and sexual orientation among the wider population in Buenos Aires to include in the city's annual household survey in 2017. INDEC collected qualitative feedback from respondents and enumerators and did not find any resistance to the new items. Cognitive interviews also demonstrated that respondents understood the questions and response categories.

The 2019 census pilot test: refining the two-step measure; testing the process. INDEC used the information collected during these surveys to refine the measures for the 2019 census pilot test, which aimed to evaluate the conceptual and operational methodology of the upcoming 2022 census (INDEC 2019b). For the 2019 pilot test, INDEC decided to move forward with a two-step measure of sex assigned at birth and gender identity because the sex assigned at birth variable is a fundamental input for calculating critical national-level indicators related to fertility and population projections and the gender identity variable can help identify trans people and any disparities they might experience in labor market, education, health care, and so on. Used together, these two variables enabled the agency to identify transgender respondents and highlight the disparities they faced (INDEC 2019a). The 2019 pilot test also incorporated feedback from the previous tests, with some updates; for example, although INDEC considered the request to include separate categories for trans man and woman, it decided to group the *travesti* and trans woman response options into one category. The 2019 pilot test achieved a 95 percent response rate (8,182 households).

Qualitative observation by INDEC during the 2019 census pilot test revealed challenges in the administration of the sex and gender identity questions for both enumerators and respondents and differences in reaction to the new questions. Enumerators were often uncomfortable asking the gender identity question, especially when surveying minors or older adults. As a result, some enumerators did not provide the complete list of response options or even skipped the question. Respondents had mixed reactions to the new measure. For some, the sex and gender identity questions caused surprise or gave

rise to jokes about the gender ambiguity of the respondent or another member of the household, and a few respondents reacted with anger or annoyance (INDEC 2019b). At the same time, others shared positive feedback on the inclusion of the gender identity question in the census (INDEC 2019b). The 2019 pilot experience produced three action items: (1) carry out awareness raising campaigns about the new gender identity measure to minimize refusals to respond; (2) train the census enumerators on administering the measure; and (3) improve the process of defining sex and gender identity, including by reading response categories aloud, noting explicitly on the form that sex refers to sex at birth, and asking the gender identity question only to those ages 14 or older to minimize respondents' discomfort (INDEC 2019b).

Quantitative results from the 2019 pilot test, released the following year, revealed that the level of error of the gender identity question was small and very close to that of the sex at birth variable (1.7 and 1.4 percent, respectively). These results indicated that, although the new questions caused discomfort in both the enumerators and the respondents, especially when it came to children or older people, this did not affect the quality of the data. Rather, it highlighted the need to normalize such questions culturally. The final recommendations from the 2019 pilot included continue to ask the question to the population ages 14 or older only and place the response categories *trans woman/travesti* and *trans man* first in the order of response options for the gender question (INDEC 2020). **Exhibit B.6** depicts the sex at birth update and gender identity question development timeline.

The 2022 census: the finalized questions, a few unexpected changes. Based on the input from those with lived experiences and pilot tests, the 2022 census questionnaire included a two-step measure: (1) sex at birth, which included an intersex-inclusive option; and (2) gender identity, which included expanded response categories. Including these two measures differed slightly from initial recommendations. First, INDEC had previously stressed the differences between biological sex and sex assigned at birth and the need to differentiate those two variables; in the final census forms, it included only the variable sex assigned at birth, piloted in 2019. Second, INDEC had initially decided to follow suggestions from the UK's ONS to preserve the sex question at birth as binary and piloted the binary version, but for the 2022 census it added the category "X/none of the above." Third, the 2022 final census forms included the gender identity question with modifications in the order of response options and a few new response categories compared to the 2019 pilot test (see **Exhibit B.6**). Fourth, although INDEC had previously recommended administering the gender identity to respondents older than 14, ultimately it recognized the importance of collecting these data for all ages (INDEC 2019a). The final census forms asked the sex at birth and gender identity questions of all respondents.

4. Encouraging Responses to the More Gender-Inclusive Question in the Census

Preparation before the census launch. INDEC depended on existing laws on sexual education and equality, public awareness campaigns, and census enumerator training to facilitate the implementation of the more gender-inclusive questions in the 2022 census. For example, a 2006 law stipulated that all students in public and private schools in Argentina have the right to receive comprehensive sexual education, and the law on education in equality, passed in 2015, established that all

schools should teach a seminar on Prevention and Eradication of Gender Violence to develop and strengthen attitudes, knowledge, values, and practices that contribute to preventing and eradicating gender violence (Ministry of Education, n.d.). In addition to the general increased awareness of gender equality among younger adults due to these laws, INDEC conducted awareness campaigns focusing on the new census items and ensured census enumerators were well trained to administer sensitive questions, following its 2019 recommendations. As a result, initial concerns that the general population might boycott the census due to the new gender identity question did not come to fruition.

Incentivizing participation at census fielding. Beyond averting a boycott, the Argentinian government and census bureau also took specific steps to increase participation in the census, such as declaring the day of the national census a holiday and encouraging all Argentinians to stay home and participate in the census. This step reduced the need to use proxy respondents for household members, although household members younger than 13 could use proxy respondents if they needed assistance.[6]

5. Analysis of More Inclusive Gender Data from the 2022 Census

To date, INDEC released some preliminary census results in January and May 2023 that included population sizes by province and departments and municipalities disaggregated by sex at birth (woman, man, and none of the above) (INDEC 2023). Although INDEC has yet to release data from the gender identity variable at the time of this report, it plans to publish a specific report on gender identity. Given that it is a new variable and concerns about compromising privacy if disaggregated at the municipal level, INDEC will likely need time to assess the appropriate level of the data to publish that will be useful for federal and municipal policymakers to develop health and other policies to better serve marginalized genders in their jurisdictions.

6. Anticipated Health and Social Determinants of Health Benefits of More Inclusive Gender Data in Argentina

This section hypothesizes how using more gender-inclusive measures in population-based surveys can contribute to the development of public policies focused on the trans population in Argentina. To construct these hypotheses, we rely on evidence from key informant interviews and a literature review.

Unintended benefits. INDEC's efforts to include more gender-inclusive questions in the census has led to several developments to advance equity for transgender people in Argentina. Awareness about the need for trans people's data has influenced the Ministry of Health to begin to offer training courses and publish clear guidelines to avoid institutional violence in the care of trans children and adolescents, as well as a document outlining the medical consensus on the use of puberty blockers and hormone replacement therapy. There are 318 medical teams in state-run hospitals and health centers that provide these services across the country (Carbajal 2023). In 2020 the Argentinian government passed a law on the access to

[6] Youth ages 13 to 16 years can typically self-respond if there is no health risk. Youth older than 16 years are typically asked to self-respond to the census questionnaire.

formal employment for *travesti*, transsexuals, and transgender people requiring all public sector organizations to hire trans people as at least 1 percent of their staff (Ministry of Women, Genders, and Diversity 2020). This law has been extended to cover private sector organizations and universities. In addition to access to the free public health care system granted in 2012, this new formal employment law expands the trans population's access to other health care options (for example, private health care). Newly collected gender identity data, if published and used by federal and provincial governments, can further improve such health services for gender minorities in Argentina.

7. Key Learnings from Argentina that Are Relevant to the U.S. Context

Here we highlight the key learnings from INDEC's experience designing and implementing a more gender-inclusive measure in the 2022 census relevant to the U.S. context.

Make visible the injustices transgender people face to increase social acceptance and shift public and political opinion toward more gender-inclusive public policies. For decades transgender activists in Argentina have worked to disseminate information about what it means to be transgender and overcome the spread of mis- and disinformation about this population. Activists have organized demonstrations demanding legal recognition, led data collection efforts that revealed the sociodemographic situation of the trans population in Argentina, and employed political and judicial strategies to promote transgender rights at provincial and national levels. The tireless efforts of these advocacy organizations have elevated the discrimination transgender individuals face as a key issue on the nation's public and political consciousness. As political will to address transgender injustices started to increase, the national government began passing laws on sexual education to raise further public awareness about gender equality. All this has paved the way for a greater level of social acceptance, civil rights, and, ultimately, legal recognition of a person's gender identity.

Mandate transgender identity as a protected class to advance political will and policy toward collecting more gender-inclusive data. Although some early state-led data collection efforts included more gender-inclusive measures, both provincial and census efforts to standardize procedures for more gender-inclusive data collection in Argentina expanded significantly after the enactment of the Gender Identity Law, which codified the legal rights of transgender people into federal law. Following the passing of the law, the government provided an official mandate and funding to the census bureau for the testing and inclusion of the sex at birth and gender identity variable in the next national population census.

Lift up transgender and non-binary representation and leadership in census bureaus and government bodies to support the development and implementation of gender-inclusive measures in population-based surveys. One key informant recommended that the United States and other countries that wish to successfully implement gender-inclusive questions on population-based surveys should systematically engage local transgender organizations as key actors in designing, developing, and testing the gender-inclusive questions. Statistical institutes should also understand that gender-inclusive variables change over time and transgender representation in census bureaus can help the census anticipate and adapt to the changes to achieve a statistical standard. Countries should also ensure there is transgender and non-binary representation in government bodies to mitigate disinformation about the transgender population, bring more visibility to the injustices they face, promote diversity and gender equality in national and international policy, and advocate that the ability to count the trans population

can lead to more transgender-inclusive public health policies.

Build on other countries' experiences with gender-inclusive measures in population-based surveys. One key informant suggested developing internal documents with best practices and recommendations about measure development, translation, and achieving statistical standards based on information from other countries' experiences with adding gender-inclusive questions to their national population-based surveys. For example, the Argentinian census bureau consulted methodological reports on development and implementation of gender-inclusive variables from other countries and held meetings with their census bureaus for additional feedback and recommendations. Countries and their statistical bureaus could also actively participate in international forums, such as the UN Global Forum on Gender Statistics, where they can openly discuss the implementation of gender-inclusive questions internationally and receive insights that can facilitate their implementation in population-based surveys at home.

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Appendix C. Case Study: Canada

Implementing a more gender-inclusive measure in the 2021 Census

Case study road map

Introduction and Key Findings

The 2021 Canadian Census, implemented by Statistics Canada, included updated questions about sex at birth and gender in an effort to enable transgender and non-binary respondents to more authentically report their gender and supply needed data about these populations. In April 2022, Canada became the first country to collect and publish data on gender diversity from a national census, finding that one in every 300 people in Canada ages 15 and older are transgender or non-binary. Statistics Canada has disaggregated census data by gender diversity status to understand the demographics of various identities, such as the age distribution, geography (urban or rural), and distribution across Canada's provinces and territories and Census metropolitan areas. Efforts to collect and report on these data have been praised as an important milestone in recognizing gender diversity in Canada, as well as an important step to improve outcomes for transgender and non-binary people in the country. Seeing the full impact of updating the census will require more time, but Canada's more gender-inclusive approach already shows the early benefits, such as improved understanding of the transgender and non-binary population in Canada. Canada's experiences provide robust information relevant to the United States (U.S.) on how to develop, test, and implement a new statistical standard in English and French (**Exhibit C.1**).

Exhibit C.1. Summary of key findings from Canada relevant to the United States

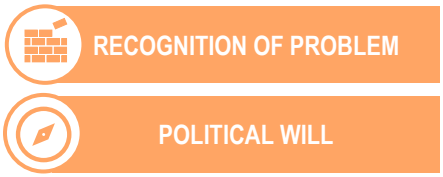
Understanding Statistics Canada's comprehensive and collaborative approach to researching, developing, and testing the gender question with English and French speakers could inform the U.S. approach to updating the Census and other population-based surveys. Specifically, Canada's use of a write-in option and machine learning to code the write-in responses could be useful to consider. The United States should also take note of Statistics Canada's commitment to soliciting feedback from the general public and using that feedback to develop and iterate on questions.

- **Societal, political, provincial, territorial, and national changes** paved the way for a question on gender identity in the census. These changes reflected greater acceptance of transgender and non-binary identities at the subnational level, including processes for updating legal documents to reflect gender, changes in national legislation toward more protection for these populations, and interest in data that can be disaggregated by gender identity in a way that includes transgender and non-binary respondents.
- **Policy change and within-census momentum**, such as the formation and recommendations of the 2SLGBTQI+ Secretariat and feedback shared with Statistics Canada during on the 2016 Census, combined with the 2018 federal budget allocating funds for the creation of Centre for Gender, Diversity, and Inclusion Statistics, led to Statistics Canada designing a gender question.
- **Extensive research, consultations, and collaboration** with transgender advocacy groups; experts in the field of gender; Two-Spirit, lesbian, gay, bisexual, transgender, queer, intersex, plus people who identify as part of sexual and gender diverse communities, who use additional terminologies (2SLGBTQ+) government agencies; and other international agencies that were developing new data collection protocols around gender, academics, and people with lived experience and from the wider 2SLGBTQ+ population was crucial to understand the processes and challenges relating to collecting reliable data on the transgender and non-binary populations living in Canada.
- **Multiple (three) rounds of testing** ensured the new items were clear in English and French. One testing approach was to conduct focus groups across Canada with members of 2SLGBTQ+ communities to comment on the new gender and updated sex at birth questions. Quantitative tests assessed the questions with a large sample of Canadians to understand response rates and distribution of responses.
- **A mix of machine learning and manual coding** enabled efficiency in coding the write-in responses to the question on gender. This was helpful considering the diversity of write-in responses received by Statistics Canada.

1. Sociopolitical and Legal Enablers to Implementing New Sex at Birth and Gender Measures in Canada's Census

This section explores the historical and sociopolitical background of gender in Canada. First, we provide a historical perspective on transgender rights in Canada and summarizes the legal and societal challenges that transgender people have experienced—particularly related to health—and how these barriers have been overcome through time. Next, we describe when Statistics Canada changed the census to become more inclusive of gender and what facilitated the update in terms of establishing a clear strategy backed by sufficient political and social will, time, budget, and staff resources to realize the change.

a. Problem recognition and political will



To fully understand the significance of including more gender-inclusive measures in the Canadian Census, it is important to recognize that Indigenous groups across North America had diverse understandings of gender. Colonial regimes and the settler governments that followed have wielded legal power to marginalize these understandings. Many Indigenous cultures in Canada have historically and currently recognized gender fluidity and/or more than two culturally salient gender roles (Eidinger 2021). For example, the term Two-Spirit is used to broadly capture concepts traditional to many Indigenous cultures in Canada. It is a culturally specific identity used by some Indigenous people to indicate a person whose gender identity, spiritual identity and/or sexual orientation comprises both male and female spirits (Statistics Canada, not published yet). Many Indigenous groups across Canada have gender traditions outside of the cisgender binary. During and after colonization, the codification of binary gender norms into laws, for example, those relating to birth certificates and marriage, has suppressed Indigenous understandings of gender outside of the binary. Canadian terminology pays homage to the Indigenous traditions once forced into invisibility. The Canadian government adopted the acronym 2SLGBTQI+ in 2022 to refer to people who are Two-Spirit, lesbian, gay, bisexual, transgender, queer, intersex, or who use another term related to gender or sexual diversity (Statistics Canada 2023).

Challenging historical norms. The women's movement and sexual revolution of the 1960s began the shift in binary- and male-centered thinking about gender norms and employment, distribution of domestic tasks, and transgender rights (Eidinger 2021). The 1969 Amendment and (De)criminalization of Homosexuality partially decriminalized same-sex relations. At this time, transgender people could not easily change their legal sex markers, meaning the government categorized many relationships as same sex (Wells 2022). The first transgender health care and research clinic in Canada opened in 1969 in Toronto, followed by a wider transgender rights and advocacy movement in the 1970s (Wells 2022). Still, psychiatrists controlled early medical transitions and there was an emphasis on invasive tests and controversial research on transgender people. Although approved only in select cases, provincial funding covered gender-affirming surgeries until the 1990s, when the government suspended and reinstated coverage only in 2008 after campaigning by activists. Baril (2017) argued that Francophone feminists tended to disregard trans issues that are more central to intersectional analyses by Anglophone feminists in Canada.

Codifying transgender rights at the national level. Canada extended national antidiscrimination laws to include gender identity and expression in 2017. Bill C-16, passed by Parliament in June 2017, explicitly codified gender expression and identity as protected grounds under the Canadian Human Rights Act and the Criminal Code at the provincial, territorial, and federal levels. This legislation introduced new antidiscrimination protections into many aspects of Canadian life, including but not limited to privacy, health care, sexual health education, identification documents, use of facilities, access to services, youth justice and detention, and more (Canadian Bar Association 2022). Bill C-16 also criminalized hate speech, hate incitement, and hate crimes committed on the basis of gender identity and gender expression. Bill C-16 does not include the deliberate use of incorrect personal pronouns when referring to a transgender person within its definition of discriminatory practices, but the Ontario Human Rights Commission released a policy in 2014 saying "Gender-based harassment can involve: (5) Refusing to refer to a person by their self-identified name and proper personal pronoun" (Dragicevic 2022). Many provinces and territories had added gender identity as a category protected against discrimination in their provincial legislation before Bill C-16 modified national law in 2017. That year, the government of Canada created the 2SLGBTQI+ Secretariat to strengthen diversity and inclusion, promote 2SLGBTQI+ equality, protect their rights, and fight discrimination (Statistics Canada 2020a). These key legal, political, and cultural events set the stage for Statistics Canada to include the gender measure in the census.

Exhibit C.2. Provincial and local power to recognize transgender identities

In the past several decades, some provincial, territorial, and local administrations in Canada have actively used administrative tools to expand and enhance legal protections for transgender people in the absence of national-level protections. **Exhibit C.3** provides a timeline for national-level changes.

Provinces and territories have significant discretion over a variety of policies that affect the legal and social experiences of transgender people, which enables them to be early agents of change. For example, by 1979, six provinces allowed transgender men and women to update the gender markers on their birth certificates, but this required proof of gender-affirming surgery, which was not then widely available. By the time Canada removed surgery requirements from the procedures for changing a sex marker on citizenship certificates in 2015, at least two provinces had removed the requirement from their own documents. Since 2017, non-binary people have been able to have an X marker for their gender on passports and many provinces and territories have allowed this on several identity documents.

Exhibit C.3. Timeline illustrating key modern legislative and historical events related to transgender rights, as well as key census actions and updates

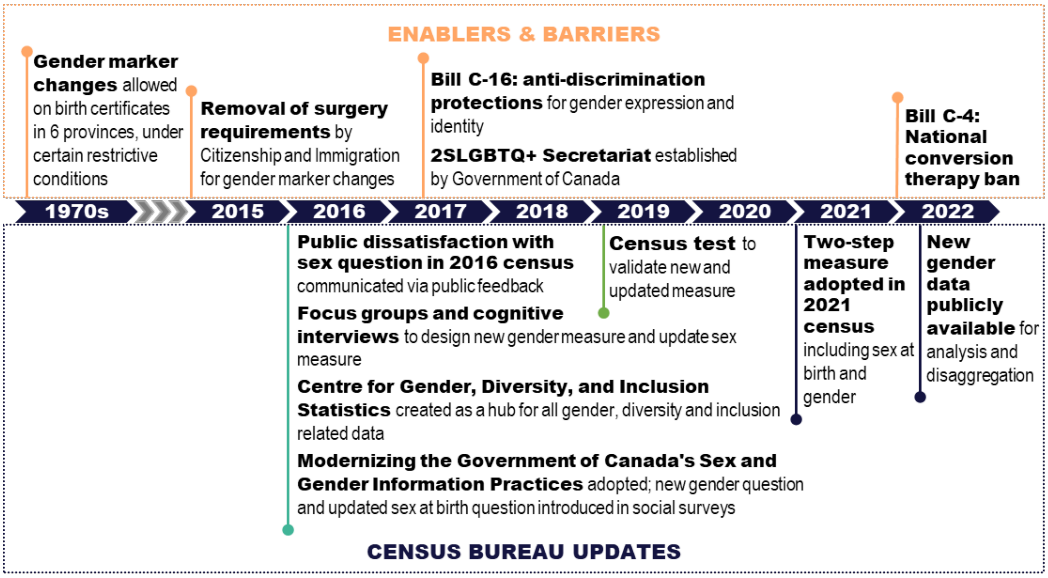
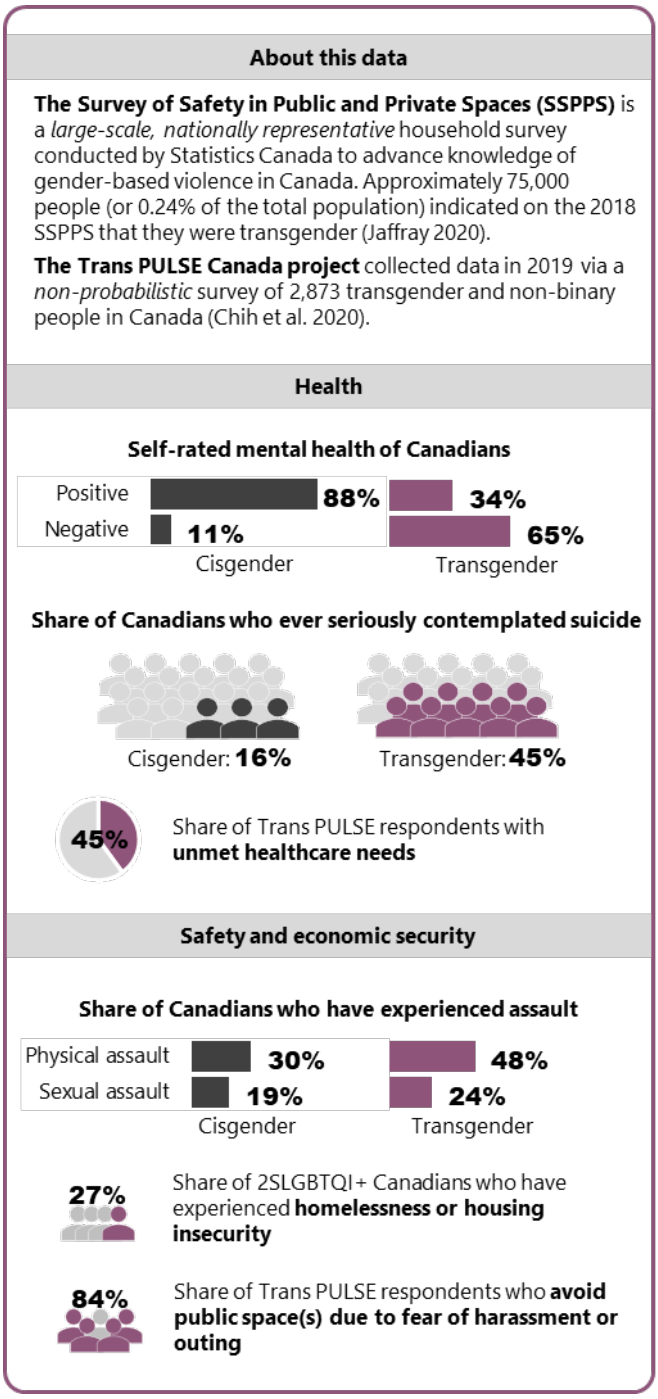


Exhibit C.4. Survey evidence of disparities between transgender and cisgender populations



Persisting discrimination and disparities in outcomes among transgender people. Despite this progress, protections, and Canada's relatively progressive legal stance on transgender rights, prejudice against gender minorities and inequities in social determinants of health (SDOH) and health outcomes remain part of Canadian society. Numerous surveys show transgender and non-binary people continue to face violence, prejudice, and structural discrimination (**Exhibit C.4**).

Activists in Canada have flagged that waves of anti-trans activism have spread to Canada after taking a hold in the United Kingdom and United States (Bellmare et al. 2021). This includes painting transgender women as dangerous men and predators and opposing using terms such as pregnant people instead of pregnant women.

This history and current reality of discrimination has highlighted the need and demand for better data and knowledge on transgender people to provide better health services and treatment. Without data on this population, it is difficult for governments, health and social service providers, researchers, and nongovernmental organizations to develop programs and policies that address their concerns and needs. According to Dr. Lori Ross, professor of public health at the University of Toronto, "If you can't be counted, then you don't count in terms of policy" (Sharpe 2020). The first step toward this goal was to have an overall count of the number of transgender people through the census.

b. Policy changes to develop a more inclusive gender measure for the census

The 2016 census asked about sex with two response options, male and female, which many respondents indicated were not adequate descriptors for themselves. The question also did not differentiate between sex and sex at birth. During the 2016 census collection period, Statistics Canada instructed respondents who were unable to answer to leave the sex question blank and provide a comment at the end of the census questionnaire explaining why they left the question unanswered (Statistics Canada 2020a) This feedback in the lead-up and the write-in comments showed there was public demand for new questions about gender, providing the impetus for policy change.

Obtaining public feedback that catalyzed policy change. Statistics Canada conducts a public consultation every census cycle in which it invites data users and the general public to provide feedback and highlight data gaps that Statistics Canada should consider addressing in the next census cycle (Statistics Canada 2019). Statistics Canada conducted its consultation process for the 2021 census in 2017 and 2018 using an online questionnaire and face-to-face discussions. All Canadians were welcome to participate in the online consultation and more than 2,800 respondents participated. Data gaps on LGBTQ2 people was by far the most commonly reported gap, with 136 mentions. More than 70 percent of those who reported this gap referenced gender. If the census collected information on the transgender and non-binary population, these respondents—who consisted of the general public, nongovernmental organizations, organizations from all three levels of government, and academics—indicated they would use the data to improve policy and programming, target services, and conduct research (Statistics Canada 2019).

> "We saw a lot of comments from respondents saying that they didn't see themselves in this census, [so] they couldn't answer those questions [which had only male and female as response options]."
>
> Key informant at Statistics Canada

Adding policymaker and researcher voices for data on gender diversity. About the same time as the 2016 census, Statistics Canada staff reported receiving requests from policymakers and researchers for more accurate data on gender. Without data, it is difficult for governments, nongovernmental organizations, and researchers to understand the health and SDOH needs, issues, and concerns of 2SLGBTQ+people in Canada.[1] Before the census updated the statistical standard, most of these statistics on transgender and non-binary people in Canada came from academic studies conducted in specific fields, usually in health, and they cannot be easily disaggregated by sociodemographic characteristics or geographic areas (Statistics Canada 2020a).

Aligning with the national commitment to transgender inclusion. During the time of the census reforms, the government of Canada, led by Prime Minister Justin Trudeau of the Liberal Party, advanced

[1] Whereas the government of Canada adopted and encourages the use of the acronym 2SLGBTQI+ to refer to Two-Spirit, lesbian, gay, bisexual, transgender, queer and intersex people and those who use other terms related to gender or sexual diversity, Statistics Canada uses the acronym 2SLGBTQ+ for data analysis purposes because information is not yet specifically collected about intersex people in surveys. (Statistics Canada 2023).

LGBTQ2 rights through various executive actions. In 2017, the government of Canada established the LGBTQ2 Secretariat (later renamed the 2SLGBTQI+ Secretariat) to "strengthen diversity and inclusion, promote … equality, protect members of this community, and fight discrimination" (Statistics Canada 2020a). In September 2018, the Treasury Board Secretariat collaborated with the Department of Justice and Statistics Canada to produce a report titled Modernizing the Government of Canada's Sex and Gender Information Practices. This report provided recommendations for collecting and using sex and gender information and states that collecting gender information in a way that includes those outside of the male and female binary should be the default for all federal organizations, and that collecting information on sex should be an exception for specific reasons or needs, such as the need for health- and demographic-related programs and statistics. Statistics Canada informants referred to this political environment as an enabler for the changes. This favorable political agenda led to various efforts to include strategies to address the lack of data on the transgender and non-binary population in the 2018 federal budget. In 2018, the federal budget allocated funds to create the Centre for Gender, Diversity, and Inclusion Statistics (Statistics Canada 2020b). The mandate of the Centre is to develop a Gender-Based Analysis Plus data hub to support making evidence-based policy decisions in government.

> "In order to obtain more inclusive data on sex and gender, Statistics Canada officials have been working with LGBTQ2 organizations to adjust Census of Population questions and response options to better reflect how people identify themselves, for example, by allowing respondents to answer in a non-binary fashion. This will provide critical information to help understand and meet the needs of LGBTQ2 Canadians."
>
> 2018 Canadian Federal Budget (Statistics Canada 2020a)

2. Statistics Canada's Approach to Designing More Gender-Inclusive Questions

Statistic Canada's development of the new statistical standard for a more gender-inclusive census question was a time-consuming and rigorous process that started with a desk review and robust consultations with a range of actors. To begin, Statistics Canada did a thorough text analysis of write-in comments from the 2016 census and the notes from the subsequent public consultation. It also consulted and conducted focus groups with experts in the field of gender, advocacy organizations, and people with lived experience and from the wider 2SLGBTQ+ population to understand the processes and challenges relating to collecting reliable data on the transgender and non-binary populations living in Canada (Statistics Canada 2020b). To ensure geographic diversity, it selected people from the East Coast, West Coast, Ontario, and Quebec. The goal of this outreach was to create a census that could accurately represent respondents with gender identities outside the man-woman binary and remain true to its mission as "the country's storyteller … providing a detailed picture of Canada's changing mosaic" (Statistics Canada 2020a).

At the request of the Conference of European Statisticians of the United Nations Economic Commission for Europe, Statistics Canada and the UK's Office for National Statistics led an in-depth review on

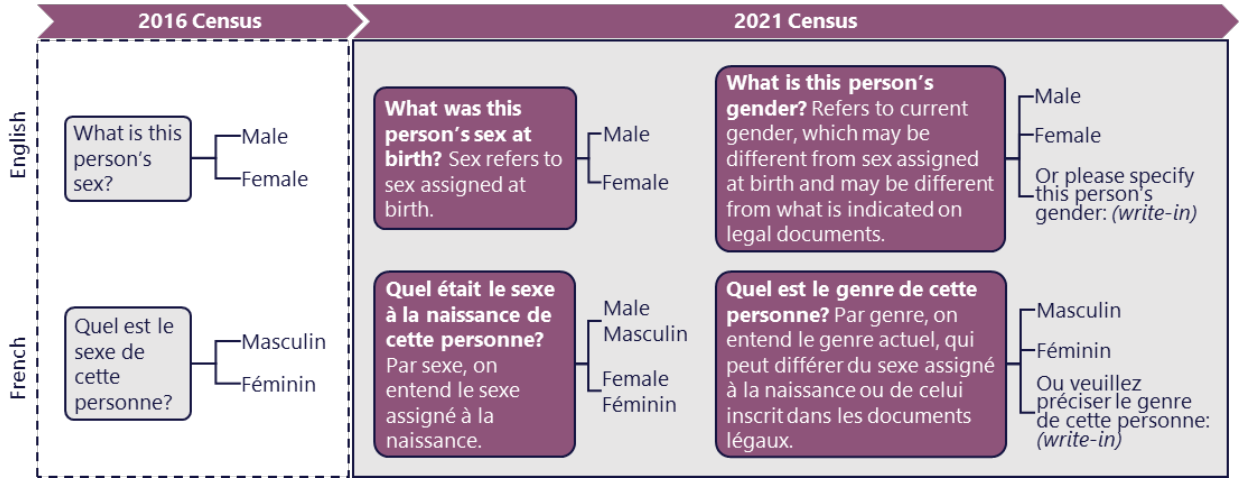
measuring gender that summarized the different approaches to statistical measurement of gender being undertaken so far, including rationale, challenges, and recommendations (Economic Commission for Europe 2019). Statistics Canada also consulted with other international agencies that were developing new data collection protocols related to gender. For example, Statistics Canada staff had regular meetings with their counterparts in Australia and New Zealand to discuss similar and contrasting experiences developing a new question about gender. Internationally, the agency also participated in a United Nations task force to develop international standards and recommendations for measuring sex and gender in censuses, surveys, and administrative files (Statistics Canada 2020b).

As Statistic's Canada began designing the more gender-inclusive questions, it had several considerations. It had to design the questions in a way that enabled transgender and non-binary respondents to answer authentically and accurately while not confusing the larger cisgender population, as high-quality data were needed for both groups. During the pilot, some respondents put "male" or "female" as a write-in response to the gender question, but those responses were available as response options. To respond to this issue, Statistics Canada adjusted the definitions and wording of the questions to improve comprehension. In addition, it considered comparability between new and old data sets. To maintain some comparability, Statistics Canada decided to continue to ask for sex but clarified that it asked about sex assigned at birth and included a question on gender.

For the 2021 census, Statistics Canada introduced a new two-step measure to collect information on gender and sex at birth (**Exhibit C.5**). The first question asked about sex assigned at birth and had two response options, "male" and "female". The second question asked about gender for all respondents and indicated that gender "refers to current gender, which may be different from sex assigned at birth and may be different from what is indicated on legal documents." The question included response options "male," "female," or a third write-in option (Statistics Canada 2022a).

> "I hope that anyone who is transgender sees this as an opportunity to let the world know how many [people] have a difference between their biological sex and the gender that they identify with."
>
> Geoff Bowlby, director general of Statistics

Exhibit C.5. Evolution of gender and sex questions on the Canadian census



The Canadian census uses dynamically generated electronic questionnaires that have, in the past, relied on a respondent's reported sex to generate text within the survey. Historically, items in the census have appeared differently for respondents based on the reported sex of the respondent or members of their household. For example, if the respondent indicates that a given person in their household is male, the ensuing Census questions about that household member would refer to that person using he/him pronouns and masculine terminology such as "brother" or "father"). A challenge was developing a new system for developing dynamic text that could include people of all genders. For the relationship to household reference person, the 2021 Census had dynamic text based on the gender, not sex, of that person. When the respondent provided a write-in answer or left gender blank, the relationship categories included both the male and female terminology for the relation. **The census did this because the French language has strict masculine and feminine forms and lacks some gender-neutral terminology for family members more commonly used in English.**

3. Testing a More Gender-Inclusive Question for Canada's 2021 Census

This section offers insight into the types of quantitative and qualitative testing Statistics Canada implemented to refine the gender-inclusive question, including testing for cognitive resonance (measure testing) and effectiveness of fielding (process testing). We draw these insights from census bureau documentation and key informant interviews with Statistics Canada staff.

A gender working group within Statistics Canada held focus group consultations to pilot new ways of asking about sex at birth and gender. During these focus groups, members examined various versions of questions about sex at birth and gender, then asked how they would react and respond to each set of questions. The responses enabled Statistics Canada to identify the limitations and challenges associated with different versions of the questions. Moreover, Statistics Canada piloted the different questions in English and French. The larger-scale validation test described below was a step to confirm the accuracy of the information gathered during cognitive testing. Organizations, experts, 2SLGBTQ+ people across different geographies, English and French-speakers, and statistical agencies from other countries were consulted. Testing a new gender question led Statistics Canada to modify other questions and response options, such as introducing gender-neutral parent labels in the place of birth of parents question (Statistics Canada 2019).

Testing the new measure was particularly important because gender is communicated and understood differently in English and in French. In 2021, 98.1 percent of the Canadian population could have a conversation in English or French, with 21.4 percent selecting French as their first official language and 75.5 percent selecting English (Statistics Canada 2022f). All census materials, including census results, are produced in both official languages. The French word for gender has multiple meanings and can mean *type* in English. During the tests, there was some confusion about the meaning of the gender question. Some French-speaking participants in tests answered with their occupation as they thought the question on gender was about their career. Moreover, some participants thought the question on gender asked about the type of people the participant was attracted to. The testing phase was helpful for specifying which terminology to use in the two instruments and avoid confusion. Statistics

Canada came up with standardized answers for enumerators and helped census workers to provide when they received questions from respondents.

PROCESS TESTING

Following public consultations and measure testing, Statistics Canada conducted a large-scale quantitative census test in 2019. The test, which the agency administered predominately online to more than 135,000 households, sought to ensure citizens could easily understand and correctly answer the new or revised questions (Statistics Canada 2020b). This phase of census testing, which Statistics Canada conducts during each census cycle, is the only stage of the census development process in which Statistics Canada can test questions among a wide variety of Canadian respondents. During this test, some respondents received a questionnaire with the previous version of the sex question and others received a questionnaire with the updated two-step measure. Statistics Canada staff then analyzed the response rate and response distribution, comparing the test results to previous national and international results. The staff deemed the response rates and response distributions acceptable. In addition, because the new gender question had a write-in category, Statistics Canada reviewed the write-in responses for validity, determining which were genuine and which were provided in protest or out of misunderstanding.

> "Basically, we use that [the quantitative test] to confirm whether the information that we collected during qualitative testing was accurate."
>
> Key informant at Statistics Canada

A challenge with the 2019 quantitative test was the lack of benchmarks around the number of transgender and non-binary people in Canada. There are relatively few comparable sources of nationally representative surveys that collect gender data. Statistics Canada used those that did exist to benchmark the results from the quantitative analysis. This will be less of an issue for future iterations and for other countries looking to test new gender questions as more data are available on transgender and non-binary populations.

4. Implementing the More Gender-Inclusive Question in the Census and Other Population-Based Surveys

STATISTICAL STANDARD

Statistics Canada adopted the new sex at birth and gender two-step approach in 2018. Since then, it has collected gender data by default, sometimes in combination with the sex at birth question when there is a specific need either to measure the transgender population or to derive health or demographic indicators.

Based on the feedback during implementation, Statistics Canada is currently testing some changes to the wording for the 2026 census (see **Exhibit C.6**). For example, Statistics Canada is considering updating terminology to consistently use the terms *man*, *woman*, *boy*, and *girl*, rather than *male* and *female*, as labels for gender in response to feedback on the 2021 census. Statistics Canada is considering asking date of birth before the questions on gender and sex at birth, making the gender response options age-dependent on the electronic questionnaire and providing the response options "boy" and "girl" for those ages 15 or younger. It is also considering updating the definitions of gender and sex at birth.

The agency has qualitatively tested these adjustments for the next census. In addition, Statistics Canada continuously updates the reference sheet used to code write-in responses as non-binary. It does this in conjunction with other social surveys as part of the national statistical standard for measuring gender. There is also a public consultation component that will inform the 2026 census. This serves as an opportunity for external stakeholders, such as researchers, to share their data needs and experiences working with census data.

Exhibit C.6. Updated questions under consideration for the 2026 census and other population-based surveys

If questions appear after those on date of birth or age

1. What is your **gender**?

Gender refers to an individual's personal and social identity as a man (or a boy), a woman (or a girl), or a person who is not exclusively a man (or a boy) or a woman (or a girl), for example, non-binary, agender, gender fluid, queer or Two-Spirit.

- Man
- Woman
- Or please specify your gender: _____

2. What was your **sex at birth**?

Sex at birth refers to the sex recorded on a person's first birth certificate. It is typically observed based on a person's reproductive system and other physical characteristics.

- Male
- Female

5. Analysis of More Inclusive Gender Data from the 2021 Census

To identify the transgender population, Statistics Canada defines as transgender any person whose reported gender does not correspond to their reported sex at birth. It includes transgender men and women but excludes non-binary people from that definition. Because a proxy may identify a person's gender and sex at birth, Statistics Canada uses the terms *reported gender* and *reported sex at birth* to define the gender variable (Statistics Canada 2021).

The non-binary category for Canada's gender question includes a variety of different gender identities and responses. It includes people whose reported gender is, for example, agender, pangender, genderqueer, gender-fluid, gender nonconforming, and/or Two-Spirit (Statistics Canada 2021). It includes people whose reported gender is both male and female, neither male nor female, or either male or female in addition to another gender. It can also include those who reported or were reported by proxy as questioning or in the process of deciding (Statistics Canada 2021).

Given the variety of responses, Statistics Canada used a mix of machine learning and manual coding to code the write-in responses to the question on gender. It coded write-in responses using a reference file and processed the responses as woman, man, non-binary person, or invalid. Some responses were direct matches to these terms and many could be easily identified as fitting the criteria to be considered non-binary, but others were less clear, which presented a challenge. Before the census, Statistics Canada tested

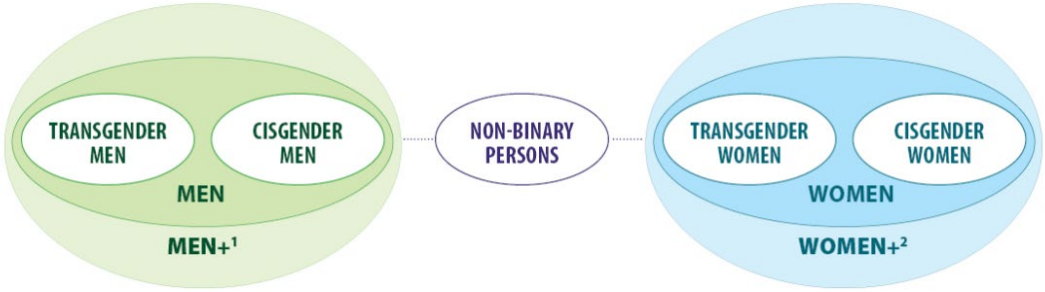
a machine learning model through an iterative process using many different write-in responses from different regions of Canada. It tested the machine learning model on a test subset of responses, and analysts reviewed the output manually to determine if the coding was correct and, if not, in what circumstances it was incorrect. Statistics Canada also deployed this machine learning model on the census write-in responses while manually reviewing samples of cases throughout to check the model and further train the algorithm to improve its accuracy. By the end of the coding process, a human coder had checked almost 100 percent of the write-in responses. Future coding of this variable will likely be less time intensive now that the models for coding the write-in responses are more robust. Analysis of the data showed that almost one-third of respondents classified as non-binary by the census described their gender using terms other than non-binary, with other responses in **Exhibit C.7**.

Exhibit C.7. Word cloud displaying the different terms provided by people in Canada whose responses are grouped under the general term non-binary people

Source: Statistics Canada (2022b)

In publicly reporting data on the more gender-inclusive questions, Statistics Canada had to balance between preserving data confidentiality and disseminating as much gender-based data as possible (Statistics Canada 2022g). The need for balance led Statistics Canada to report data only on transgender and non-binary respondents in larger geographical areas and use the terms *men+* and *women+* in smaller geographic tracts (Statistics Canada 2022g). *Men+* includes transgender men, cisgender men, and some non-binary people and *women+* includes transgender women, cisgender women, and some non-binary people, as shown in **Exhibit C.8** from Statistics Canada's website (Statistics Canada 2022c). Before the census data release in late April 2022, Statistics Canada released several reference documents, including a video (Statistics Canada 2022h) and a fact sheet (Statistics Canada 2022c), to inform the Canadian population about the gender dissemination strategy. The agency published recommendations on the gender dissemination strategy for other social surveys internally.

Exhibit C.8. Gender dissemination strategy



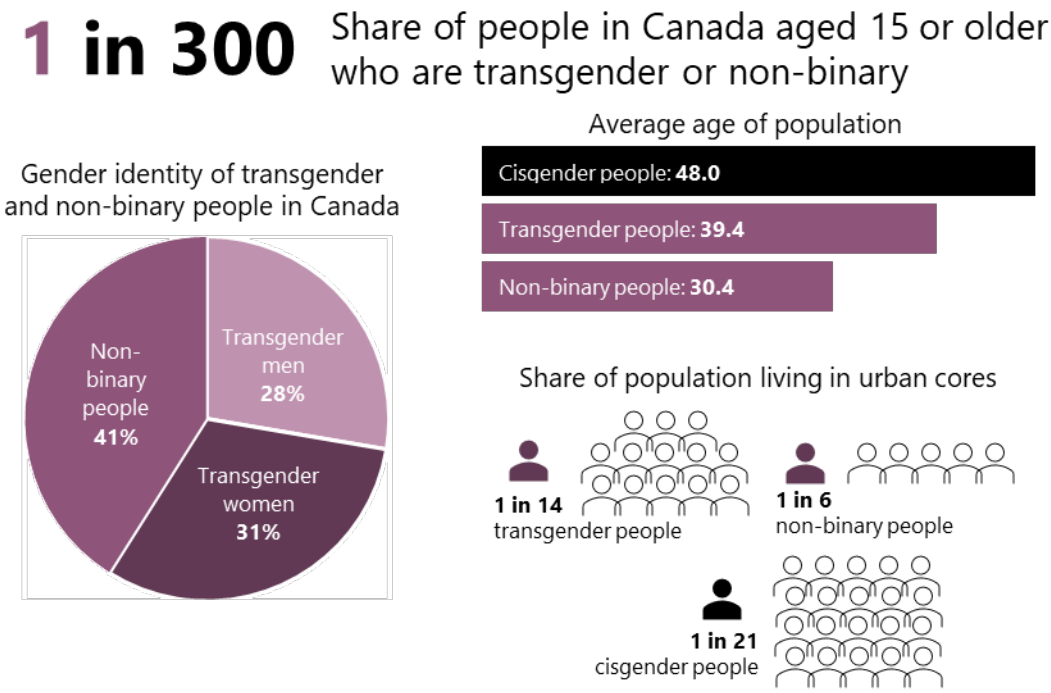
Statistics Canada also had to keep in mind small cell sizes and confidentiality when disaggregating by age. It often opted to use two broad age groups—15 to 34 years and older than 35—when disaggregating using the cisgender, transgender, and non-binary classification, as shown in **Exhibit C.9** (Statistics Canada 2022d).

Exhibit C.9 Data aggregation by Statistics Canada, by age

Geography	Canada (map)							
Gender (8)[1]	Total - Gender	Cisgender persons	Cisgender men	Cisgender women	Transgender persons	Transgender men	Transgender women	Non-binary persons
Broad age groups (3)[2]								
Total - Age	30,336,135	30,235,320	14,814,235	15,421,090	59,455	27,900	31,555	41,350
15 to 34 years	9,079,505	9,016,950	4,574,670	4,442,275	31,315	17,715	13,595	31,240
35 years and over	21,256,630	21,218,375	10,239,565	10,978,810	28,145	10,185	17,960	10,110

The ability to disaggregate data by gender in a way that includes transgender and non-binary respondents gives valuable information to researchers and policymakers. For starters, the new census identified 100,815 transgender or non-binary people, which is the first national count of gender diversity. Much of the data and associated analysis, such as tables and infographics with demographic information on transgender and non-binary respondents such as those in **Exhibit C.9**, are publicly available on the Statistics Canada website.

Exhibit C.10 Demographic data on transgender and non-binary respondents in Canada from the 2021 census



Data source: Statistics Canada (2022b)

Statistics Canada focuses mostly on the socioeconomic characteristics of transgender and non-binary respondents older than 15. It is considering looking at transgender and non-binary respondents younger than 15 in the future but will have to consult more with experts. Its data release states "The analysis of gender diversity results is limited to the population aged 15 and older even though the question was asked regardless of age, as children aged 14 and younger may not be fully aware of their gender identity or may not have defined it yet" (Statistics Canada 2022b). However, data on children ages 14 and younger are available and can be requested from Statistics Canada (as a special request) or accessed through the Canadian Research Data Centre Network (CRDCN). Another use for the more gender-inclusive questions for analysis was to identify same- or opposite-sex couples and families. Statistics Canada decided to use the gender variable (rather than the sex at birth variable) to report on couple families (Statistics Canada 2022e).

6. Anticipated Health and SDOH Benefits of More Inclusive Data in Canada

This section hypothesizes how the data collected on gender diversity in the 2021 census in Canada might lead to improved outcomes related to health and SDOH. To construct these hypotheses, we relied on information from key informant interviews and media reports.

Improved survey experience

Respondents' feelings about the new questions were generally positive, with some mixed feelings: some expressed feeling offended by the recognition of gender identity on the census, whereas others believed the changes did not go far enough to include transgender and non-binary respondents. Statistics Canada analyzed comments received from people responding to the census and calling the Census Help Line. There was significant positive feedback from transgender and non-binary people who mentioned that updating the sex at birth and gender questions was a good start as it acknowledged the diversity of gender identities that exist in Canada. Some reported hoping that organizations that rely heavily on data to inform their programs and strategies would use the information to include transgender and non-binary populations. However, a few transgender or non-binary respondents were offended at being asked about their sex at birth, saying it was "dated" or "transphobic", with some finding this question "triggering." Some would have preferred being asked about trans identity directly rather than inferring it using the responses to sex at birth and gender. Gemmill (2021) found some respondents would like to see options, such as non-binary, included in the census to normalize some language about transgender inclusivity. Statistics Canada is analyzing these comments because it is working to update the gender and sex at birth questions.

Improved design/ tailoring of health programs

After becoming the first country to provide census data on transgender and non-binary people, Canada already has plans for how these data will inform policy (Statistics Canada 2022b). Federal, provincial, territorial, and municipal policymakers intend to employ this data to develop and evaluate inclusive policies across a variety of sectors, including the labor market, health care, justice and crime, housing, and well-being indices (Statistics Canada 2020b). Statistics Canada has identified likely users of this newly collected data as the 2SLGBTQI+ Secretariat, the Treasury Board of Canada Secretariat, Employment and Social Development Canada, Indigenous Services Canada,

Health Canada, the Public Health Agency of Canada, the Canadian Human Rights Commission, the Public Service Commission, Justice Canada, Public Safety Canada, and Women and Gender Equality Canada (Statistics Canada 2020b).

Because the government released much of these data to the public only in mid-2022, their use is likely to increase with time. We identified three academic publications that cite the 2021 Census data in research on experience of microaggressions among non-binary and genderqueer youth (Arijs et al. 2023), inclusive communication in French in the field of occupational therapy (Lamontagne et al. 2022), and a critical examination of healthcare access and gender expression among transgender, non-binary, and other gender non-conforming people during the COVID-19 pandemic (Grey et al. 2023). All three of these health-related publications used 2021 census data on gender to quantify the transgender and non-binary population, demonstrating the relevance of their research and its associated health implications. Because the transgender and non-binary populations are very small, the census is the only statistical tool that provides reliable counts at the local level (such as municipalities). This is important because municipalities are responsible for providing a number of services directly to the population (Statistics Canada 2020a). Statistics Canada plans to release at least one post-census article on the economic well-being of transgender and non-binary people in Canada. It also plans to study transgender and non-binary children and youth and release a publication on the findings.

Increased visibility signals affirmation of gender identities, shifts norms, and strengthens enablers for further progress

Changing the census has an influence on public awareness and data consumption. The news and social media coverage of the Statistics Canada reported dialogue on social media, specifically on reddit, where Canadians discussed the updated census questions and subsequent data. This appears to be predominantly educational with the changes being celebrated. However, some respondents used the write-in response area to voice their opposition to an acknowledgement of transgender and non-binary gender identities. Statistics Canada said a time-consuming part of its coding of write-in responses was separating genuine responses from malicious or joke entries.

7. Key Learnings from Canada that Are Relevant to the U.S.

We conclude with a summary of the key learnings from Statistics Canada experience designing and implementing a more gender-inclusive measure in the 2021 Census that are relevant to the U.S. context.

Societal, political, provincial, territorial, and national changes towards transgender and non-binary inclusion can pave the way for a question on gender identity in the census. These changes reflected greater acceptance of transgender and non-binary identities at the subnational level, including processes for updating legal documents to reflect gender, changes in national legislation toward more protection for these populations, and interest in data that can be disaggregated by gender identity in a way that includes transgender and non-binary respondents.

Policy change and within-census momentum are essential. For example, the formation and recommendations of the 2SLGBTQI+ Secretariat and feedback shared with Statistics Canada during on the 2016 Census, combined with the 2018 federal budget allocating funds for the creation of Centre for

Gender, Diversity, and Inclusion Statistics, led to Statistics Canada designing a gender question.

Extensive research, consultations, and collaboration with diverse actors support the design of inclusive items. In Canada, this included transgender advocacy groups; experts in the field of gender; Two-Spirit, lesbian, gay, bisexual, transgender, queer, intersex, plus people who identify as part of sexual and gender diverse communities, who use additional terminologies (2SLGBTQ+) government agencies; and other international agencies that were developing new data collection protocols around gender, academics, and people with lived experience and from the wider 2SLGBTQ+ population was crucial to understand the processes and challenges relating to collecting reliable data on the transgender and non-binary populations living in Canada.

Multiple rounds of testing can ensure that new items are clear in multiple languages. Statistics Canada did three rounds of testing of the new items to ensure clarity in English and French. One testing approach was to conduct focus groups across Canada with members of 2SLGBTQ+ communities to comment on the new gender and updated sex at birth questions. Quantitative tests assessed the questions with a large sample of Canadians to understand response rates and distribution of responses.

Consider using a write in response option and various tools to analyse the various entries. In Canada, a mix of machine learning and manual coding enabled efficiency in coding the write-in responses to the question on gender. This was helpful considering the diversity of write-in responses received by Statistics Canada.

8. References

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Appendix D. Case Study: England and Wales

Implementing a more gender-inclusive measure in the 2021 census

Case study road map

Introduction and key findings

The Office for National Statistics (ONS), the statistics bureau responsible for the census in England and Wales as well as for producing United Kingdom (UK)-wide statistics, made a significant update to the Census 2021 in England and Wales by including a question about whether the respondents' gender identity differs from their sex assigned at birth (replacing a two centuries-long approach that conflated gender with sex). This decision represented an important milestone in recognizing and acknowledging gender diversity in England and Wales. In addition, these data for 262,000 people (one in every 175 people over the age of 15) who identified with a gender different from their sex registered at birth enabled new analyses to inform future policymaking to improve the health and well-being of transgender and non-binary people. The goal of this case study is to understand the strategies the ONS deployed to develop and implement the more gender-inclusive measure in the census, and to extract learnings relevant to the United States (U.S.) (summarized in **Exhibit D.1**) as it considers how to make its census more gender inclusive.

Exhibit D.1. Summary of key findings from England and Wales relevant to the U.S.

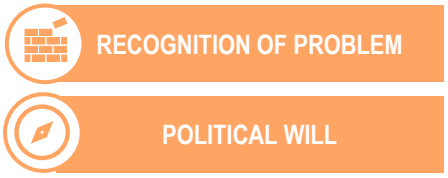
Emulating the ONS' commitment to transparency and comprehensive research in developing and testing the gender identity question could help the U.S. mitigate polarization in public discourse. The ONS' extensive and rigorous testing underscores the importance of evaluation in the process of developing the gender identity question, while also emphasizing the need for data protection and privacy in reporting to maintain informed decision making and accountability in census operations. The U.S. should heed the lessons learned by the ONS regarding the incorporation of various cultural perspectives in developing and implementing census questions; this approach will promote inclusivity and accuracy in data collection within a diverse society.

- **Laws over the past few decades** in the UK have set the stage for recognizing and protecting gender minorities. For example, the Gender Recognition Act of 2004 enabled transgender people to change their legal gender and the Equality Act of 2010 mandated workplace protections for transgender people.
- **Societal and political changes** increased demand for a question on gender identity in the census. These changes reflected greater acceptance of the transgender identity in the general population and changes in the legislative landscape toward more protection for gender minorities.
- **Extensive research, consultations, collaboration, and transparency** with transgender advocacy groups, government agencies, and academics informed the development and successful implementation of the gender-inclusive question. The ONS faced challenges from public pressure, legal disputes, and differing opinions within the academic community, particularly regarding the wording of the question. However, extensive testing and transparency in the process mitigated these challenges.
- **Multiple years and 13 iterations of qualitative and quantitative testing** conducted from 2017 through 2019 helped to develop, test, and ensure the effectiveness of the new gender identity question.
- **Evidence of disparities enables policy action.** Researchers have analyzed the 2021 census and found that transgender people more frequently report their overall health as "not good" compared to cisgender people. This underscores the need for policymakers to address these disparities through tailored interventions and collaboration with the ONS to enhance data use while acknowledging limitations related to data aggregation and challenges counting the transgender population.

1. Sociopolitical and Legal Enablers to Updating the Census to be More Gender Inclusive in England and Wales

In this section, we explore the key sociopolitical and legal enablers to implementing gender-inclusive measures in the census in England and Wales, drawing on a review of the literature and documentation (and rooted in the Kingdon [2010] model of policy change).[1] First, we discuss the history of evolving political will to address the problem of defining gender as binary (as reflected in laws and policies, and the data that inform them) in the wider UK,[2] which represents a key barrier to improving health and well-being for trans and non-binary people. Next, we describe when the ONS changed the census to become more gender-inclusive, and what facilitated the update in terms of establishing a clear strategy backed by sufficient budget and staff resources to realize the policy change.

a. Problem recognition and political will



To fully appreciate the significance of including more gender-inclusive measures in the census, it is important to recognize that issues related to transgender rights have a long and complex history in the UK (**Exhibit D.2**). The struggle for transgender rights in the UK is intrinsically linked to the broader LGBTQIA+ rights movement. Progress toward greater recognition (problem recognition) and acceptance (political will) of gender minorities has been hard-fought and relatively recent. It was not until the 1960s and 1970s when broader social and cultural recognition began to develop that the UK government's definition of gender as binary (as reflected in laws and policies, and the data that inform them) proved problematic to improving the well-being for a marginalized part of the population, trans and non-binary people. Several key legal, political, and cultural events set the stage for the ONS to evolve the gender measure in the census **(Exhibit D.3)**.

[1] We were unable to conduct key informant interviews with representatives from the ONS, likely due to political sensitivity surrounding recent legislation (described in the following section). Nevertheless, the ONS has published detailed reports on its website regarding the development and testing of the gender identity question, along with some findings related to the 2021 census.

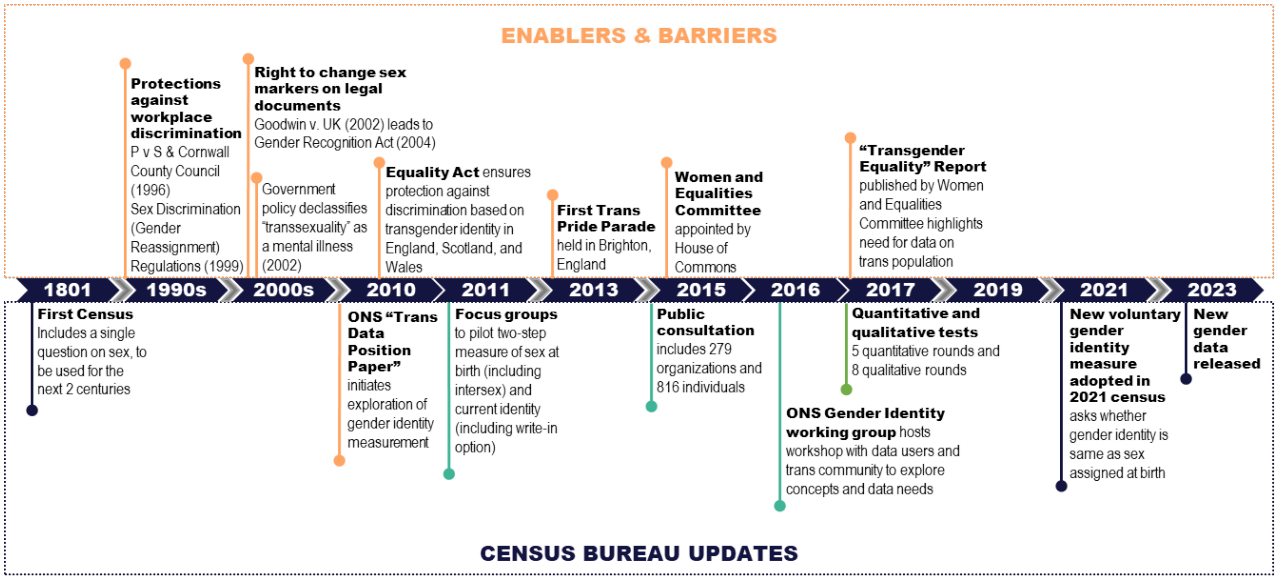
[2] The UK includes England, Wales, Scotland, and Northern Ireland. This case study focuses primarily on England and Wales because the ONS is responsible for conducting the census in these countries, which included the new more inclusive gender identity measure in 2021. Another agency, National Records of Scotland (NRS), oversees the census in Scotland. The NRS also introduced a new gender question; however, because the ONS and the NRS have each crafted their distinct testing and development plans, we have opted to concentrate our coverage on England and Wales, which encompass a significant portion of the UK population. Scotland's development and testing approach is presented in NRS (2021). Northern Ireland, on the other hand, is managed by the Northern Ireland Statistics and Research Agency (NISRA), which chose not to include a gender question in their census (NISRA 2021).

Exhibit D.2. History of LGBTQIA+ rights in the UK from colonialism to today

Examining the complex history of gender in the UK requires going beyond recent decades and recognizing the enduring impact of the British Empire on modern British society. The discovery of *hijras* (the *third gender*)—a non-binary gender expression comprising eunuchs, intersex, and transgender identities—by the British government in India had a significant impact on gender and sexuality in India. In 1861, the British government introduced Section 377 in the Indian Penal Code to prosecute homosexual activities and *hijras*, based on the Buggery Act of 1533, which was the first legislation against homosexuals in England. The *hijras* were perceived as an ungovernable population and objects of moral fear, endangering so-called colonial masculinity, and were closely scrutinized in the imperial censuses and on the ground. A decade later, the Criminal Tribes Act of 1871 further targeted the *hijras* with the goal of eradicating them from public spaces (Gannon 2009; Hinchy 2014). This history underscores the extensive influence of British colonialism on gender and sexuality in other parts of the world, as well as the intersectionality of identity and the state's responsibility in shaping and enforcing social norms.

After World War II, the most significant progress toward advancing rights for the LGBTQIA+ community has related to legalizing same-sex relationships. In 1957, the Wolfenden Report recommended the decriminalization of sexual relationships between men in response to a series of arrests for indecency (Camden and Islington NHS Foundation Trust [n.d.]; Thane 2010). This led to the partial decriminalization of "homosexual acts" in 1967 in England and Wales, and in Scotland and Northern Ireland in 1980 and 1982, respectively. The legalization of same-sex marriage in England and Wales in 2014, Scotland in 2016, and Northern Ireland in 2020 was another significant milestone among several other crucial steps (Stonewall UK 2016).

Exhibit D.3. Timeline illustrating key modern legislative and historical events related to transgender rights, as well as key updates to the census



Creating awareness about and affirming lesbian, gay, bisexual, transgender, queer, intersex, asexual, plus other (LGBTQIA+) identities. In 1966 the first transgender support group formed in the UK. The Beaumont Society aimed to provide better information and awareness about transgender people and to "facilitate mutual support and communication in order to improve the health, emotional well-being and confidence of transgender people" (Beaumont Society 2018).

Enacting laws to protect trans and nonbinary people. When the UK joined the European Economic Community (EEC) in 1973, advocacy organizations gained the ability to challenge UK laws in European Courts (Thane, 2010). Advocacy organizations used this ability to support laws to protect transgender and nonbinary people, such as the Sex Discrimination (Gender Reassignment) Regulations in 1999, providing the first legal protections for transgender people in the U.K. (Nevrkla 2018; ONS 2009). This act amended the Sex Discrimination Act of 1975 and prevented discrimination against transgender people undergoing medically supervised transition in the workplace and vocational training.[3] The gains during this decade focused specifically on employment and workplace-related advancements, whereas the subsequent decade witnessed broader progress related to gender identity affirmation.

During the early 2000s, transgender people continued to secure major victories related to gender identity affirmation through the European Court of Human Rights (ECHR), namely the Gender Recognition Act.[4] The Act enables people to have their acquired gender recognized legally: it establishes the process for obtaining a Gender Recognition Certificate and outlines its implications for official documents (including new birth certificates), marriage, state benefits, and other areas. In addition, the Act includes restrictions on the disclosure of information related to a person's application for the certificate. Although a step in the right direction, many transgender people find the application process administratively difficult and expensive (Fairbairn et al. 2020).

Destigmatizing transgender identities. With the Act affirming transgender identities, a critical clause served to promote continued stigmatization. Although the Act does not required applicants to have had gender reassignment surgery or hormone treatment to obtain a Gender Recognition Certificate, it does require them to present proof of a medical diagnosis, unfortunately promoting the archaic idea that being transgender is a mental health issue. Helping to counter this idea around the same time, the Government Policy Concerning Transsexual People paper, published by the UK government in 2002, offered a significant clarification by stating that transsexuality would no longer be categorized as a mental illness. This was an important step in destigmatizing transgender identities and dispelling damaging myths and prejudices in the policy and social environments.

Providing broader accountability to discriminatory acts against transgender people. The Equality Act of 2010 made it illegal to discriminate based on gender reassignment in England, Scotland, and Wales (excluding Northern Ireland) (Hines 2018; Nevrkla, 2018). The Act, championed by Harriet Harman during her tenure as Minister for Women and Equality in the Labour government, has played a significant role in promoting inclusivity and equality in the UK. This comprehensive legislation prohibits workplace and societal discrimination based on protected characteristics including gender reassignment, consolidating

[3] A 1996 ruling by the European Court of Justice in the case of *P v S and Cornwall County Council* set the stage for this law. In this case, the Court determined that it was illegal to terminate employment based on gender reassignment status.

[4] In the case of *Goodwin v. United Kingdom* (2002), a British transgender woman, Christine Goodwin, highlighted workplace discrimination, social security issues, and marriage discrimination resulting from the absence of a procedure for changing her national insurance number and birth certificate (Hines 2018). The ECHR ruled that the UK violated the European Convention on Human Rights, counselling the UK government to provide new birth certificates matching gender identity. The Goodwin case marked a turning point for transgender rights in the UK, leading to the passage of the Gender Recognition Act of 2004, widely recognized as one of the most crucial and influential pieces of legislation concerning transgender rights in the UK.

previous antidiscrimination laws[5] into a single law, simplifying legal protections, and improving coverage in specific situations. As a result, the Act provides better protection for transgender people against discrimination in employment or provision of public services.

Changing social norms. The first Trans Pride was held in Brighton, in the south of England, in 2013. Since then, participation has increased every year and similar events are now held across both countries.

Ongoing discourse. In the 2020s, the UK's nations adopted diverse approaches to legal gender recognition, resulting in political sensitivity. Scotland introduced the Gender Recognition Reform (Scotland) Bill aiming to eliminate medical evidence requirements (which promote the idea that being transgender is a mental illness and present barriers to applicants), when applying for a Gender Recognition Certificate. Meanwhile, Wales sought the devolution[6] of the Gender Recognition Act and the ban of so-called "conversion therapy," which are practices that aim to change the gender identity or sexual orientation of LGBTQIA+ people. Meanwhile, debates continue in England. However, in January 2023, after six years of discussion, Scotland's Gender Recognition Reform bill passed but the UK government swiftly vetoed it, citing concerns about having two gender recognition systems in the UK and increased fraudulent applications. The issue of transgender rights has expanded into a broader debate on Scottish independence, with both sides still seeking resolution.

Despite the UK's progressive stance on transgender rights, significant obstacles persist in health care access and hate crimes. Health-based discrimination remains common, and many health care professionals lack a comprehensive understanding of transgender-specific issues (Hobster and McLuskey 2020; Whitehead, 2017). Hate crimes against transgender people are a major concern in England and Wales, and though many go unreported, at least 2,630 instances were documented by police in 2020 and 2021 (Home Office 2021). Collecting gender-inclusive data through the census can inform addressing these challenges and enhancing health care services for transgender people. Furthermore, as media coverage plays a role in societal tension,[7] the census can aid in understanding and addressing transgender experiences and recognition.

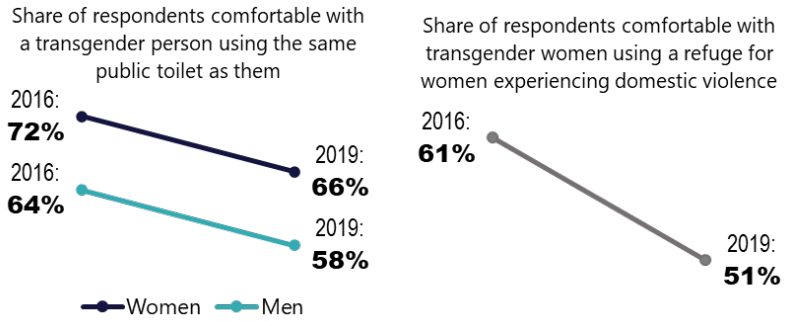
[5] Including the Sex Discrimination Act 1975, the Race Relations Act 1976, the Disability Discrimination Act 1995, the Employment Equality (Sexual Orientation) Regulations 2003, and the Equality Act (Sexual Orientation) Regulations 2007.

[6] Devolution refers to the transfer of governmental power, granting specific powers to entities like the Scottish Parliament, the National Assembly for Wales, the Northern Ireland Assembly, and the Greater London and Local Authorities. The issue of gender recognition is devolved to Scotland, allowing it to implement policies distinct from those voted on by the UK Parliament (Fairbairn et al. 2020). Meanwhile, Wales is actively seeking devolution of powers concerning Gender Recognition to support the trans community and tackle inequalities in Wales (Welsh Government 2023). England does not have a devolved Parliament.

[7] The media further amplifies societal tension, with recent research commissioned by the major press regulator (Independent Press Standards Organisation 2020) indicating a 400 percent rise in coverage of trans issues in UK publications over the past decade.

Although public attitudes toward transgender people are mixed, opinions vary depending on the situation (**Exhibit D.4**). Notably, an increasing proportion of the population believes transgender people should be able to self-identify their gender (Smith 2020), although some opposition remains on certain topics, highlighting the need for further data and dialogue.

Exhibit D.4. Varying public attitudes on transgender inclusion



Data source: 2019 British Social Attitudes survey (Morgan et al. 2020)

b. Policy change to develop a more inclusive gender measure for the census

POLICY CHANGE

The legal and societal shifts in the UK surrounding gender identity have enabled policy change to generate better, more comprehensive data on the transgender and non-binary population in England and Wales through the census. Before the Census 2021, there was a lack of precise data concerning the number of transgender people residing in England and Wales; however, estimates put the number between 200,000 and 500,000 in the UK (Government Equalities Office 2018). Although several social surveys and administrative data have tried to capture gender identity, many could not identify people whose gender identity differs from their sex registered at birth, and had limited coverage (for example, to just one country or age category) (ONS n.d.). Over time, political will has grown to establish a benchmark to allow all government, public, and private sector organizations to access high-quality data on gender identity in England and Wales.

Shifting opinions about more gender inclusive questions in the census. Following the 2007 Equalities Review conducted by the Cabinet Office, the ONS published a Trans Data Position Paper in 2009 (ONS 2009), which assessed the legal framework, data user requirements, and potential methodological constraints related to gender data. The paper concluded that "data collection via ONS household surveys is not the most appropriate method for collecting this data." At that time, the ONS advised that people with strong connections to the transgender community should explore alternative approaches to meet the needs of users, including through attitude surveys, administrative data, and specialized surveys. However, The Equality Act 2010 marked a turning point for the ONS, as it pushed the organization to revise its position outlined in the 2009 paper: "Furthermore, the Act introduced a public sector Equality Duty, which requires public bodies to consider how their policies affect people with protected characteristics" (ONS 2016).

Making the case for more gender inclusive questions in the census through public opinion. The ONS carried out a consultation in 2015 to gather information on the requirements for the next census in 2021 and published a related response paper the following year (ONS 2016). A total of 279 organisations and 816 people responded. Among them, 14 respondents (people and organisations) requested an additional topic on gender identity and 30 respondents discussed gender identity under the "Basic demographics and household composition" topic or other sections. Some respondents highlighted the importance of ensuring that those who do not identify as male or female can provide an accurate response to the 2021 Census. The paper stated that "Data users showed a clear requirement for gender identity for policy development and service planning; especially in relation to the provision of health services." Activist groups (such as Stonewall, an LGBT rights charity in the UK, and the Gender Identity Research and Education Society, a UK charity that focuses on supporting trans and gender diverse people) highlighted the issue of insufficient and poor-quality data related to the transgender population, especially related to health policies.

> "Until recently, resource allocation with regard to gender non-conforming people, especially in health services, has been based on very outdated data. This has failed to reveal that gender-nonconforming people comprise about 1 percent of the general population. A rapidly growing but still relatively small proportion of that population has so far sought medical care for their gender variance. That growth has overwhelmed the specialist NHS [National Health Service] gender identity services, for which waiting lists are now measured in years. Based on the size of the gender non-conforming population, that growth rate is likely to continue for the foreseeable future."
>
> Gender Identity Research and Education Society comment (ONS 2016)

Making the case for more gender-inclusive questions by highlighting potential benefits and uses for the information. The Women and Equalities Committee, appointed by the House of Commons in 2015, conducted an inquiry into transgender equality that led to the publication of the report titled Transgender Equality (Women and Equalities Committee 2015). The report highlighted that "Trans people experience worse health (both physical and mental) than the general population, which is likely to be substantially due to the direct and indirect effects of the inequality which trans people experience" and provided a scathing review of the NHS' treatment of the population. The report also highlighted the lack of high-quality data about the transgender population: "It is telling that there is a lack of good quality statistical data regarding trans people in the UK."

> "We have found that the NHS is letting down trans people, with too much evidence of an approach that can be said to be discriminatory and in breach of the Equality Act."
>
> Women and Equalities Committee (2015)

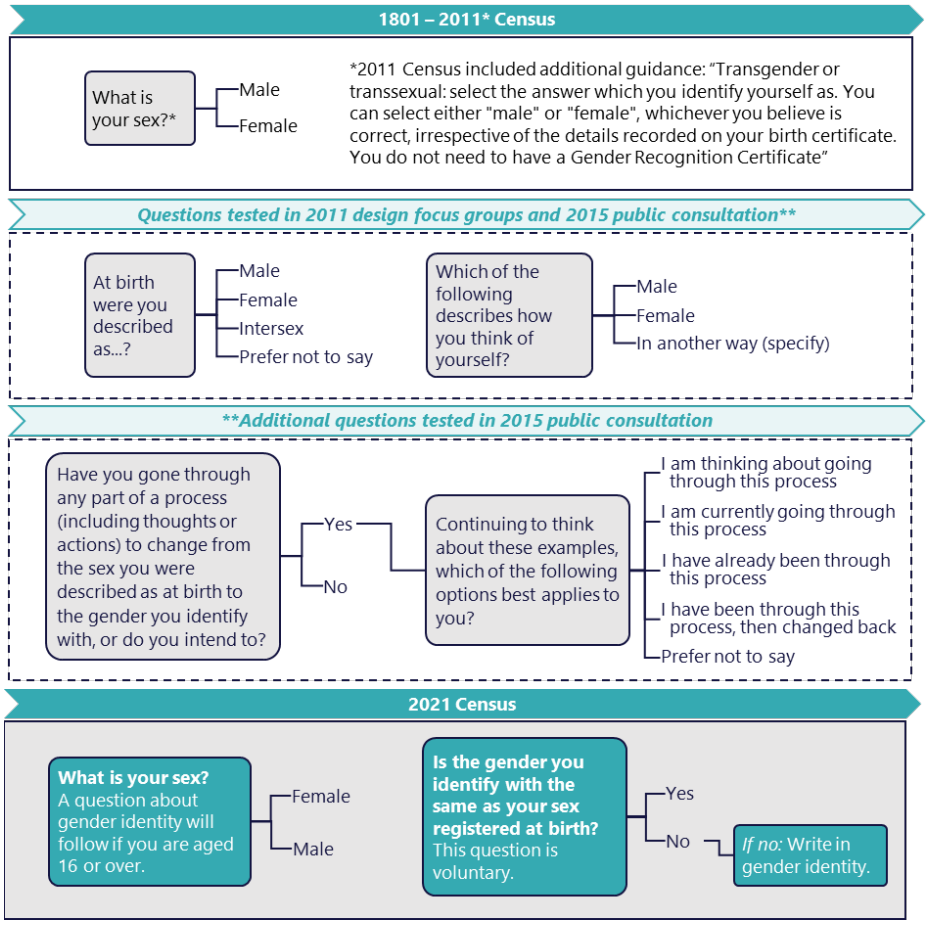
Committing to policy change. In 2017, the ONS committed for the first time to developing a more inclusive gender measure for the census. In the 2016 Gender Identity Update paper (ONS 2016), the ONS acknowledged the changing societal views on gender and committed to "assessing how to measure the size of the U.K.'s transgender population so that policy can be more evidence-based."

2. How the ONS Designed the More Gender-Inclusive Question

DESIGN

From 2011 to 2019, the ONS designed and tested several revised or new questions on sex and gender, as illustrated in **Exhibit D.5**. This long development process for more gender-inclusive questions began with extensive research on gender-inclusive measures in previous surveys in the UK and in other countries, including Australia, India, and Nepal, which had already included a gender identity question (ONS 2016). The ONS engaged with those countries' statistical agencies and thoroughly examined the measures implemented in these countries, as well as actions plans in other European countries. Along with this research into other countries' approaches, intensive consultations began in 2016 with transgender advocacy groups, traditional women's groups, LGBTQIA+ groups, government agencies, academic institutions, users of data on the female population and the general population, users of sex data, and those expressing interest in gender identity data (Rosiecka 2021). This consultation evolved into the formation of the Gender Identity working group and convening a Gender Identity workshop in 2016 "to explore concepts, terminology and data needs together with members of the trans community and users of gender identity data" (Rosiecka 2021). Following the workshop, the ONS continued to collaborate formally and informally with these actors through gender identity update events, correspondence, and individual meetings to ensure continued dialogue with all actors (ONS 2021a).

Exhibit D.5. Evolution of gender and sex questions on the UK census



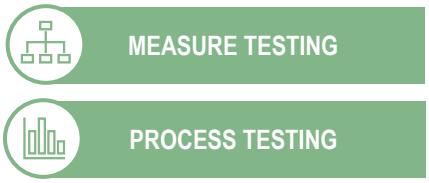
To arrive at the gender identity question included in the 2021 Census, the ONS had to overcome several public and political pressures.

Public pressure. Public pressure manifested in requests made under the Freedom of Information Act for the disclosure of all emails exchanged between the ONS and Stonewall, an LGBT rights charity in the UK, as well as other email correspondences about sex and gender. Furthermore, one request sought information about the authors of reports distinguishing between sex and gender, as well as the title of the person within the ONS who approved these documents. These requests exemplify the level of scrutiny the ONS faced during the process of developing the gender identity question.

> "Question design was complex because the language related to the topic of gender identity is continually developing and there are many identities with which people may want to identify."
>
> ONS (2021a)

Political pressure. Just before the census, the ONS was prompted to revise its guidance after it was challenged in court (ONS 2021a). At the time, the guidance stated: "If you are considering how to answer, use the sex recorded on one of your legal documents such as a birth certificate, Gender Recognition Certificate, or passport." Challengers, including academics, argued that this phrasing would lead to the problematic conflation of sex with gender identity because changing one's sex on a passport or driver's license was far simpler than changing it on a birth certificate, which required a Gender Recognition Certificate from the UK's Gender Recognition Panel. The High Court ruled in favor of a more stringent approach, deciding that a person's sex would be determined "as recorded on a birth certificate or Gender Recognition Certificate."[8, 9]

3. How ONS Tested the More Gender-Inclusive Question



The ONS engaged in quantitative and qualitative testing to refine the gender-inclusive question, including testing for cognitive resonance (measure testing) and effectiveness of fielding (process testing). ONS documentation provides insights into this process, which included 13 formal tests carried out from 2017 through 2019. Of these 13, eight were qualitative and five were quantitative tests conducted by both the ONS and external suppliers. The ONS (2021a) provided a comprehensive list of all quantitative and qualitative testing, including the year, period, topic, type of test, whether conducted by the ONS or an external supplier, research method, purpose, and sample size.

Qualitative tests. The eight qualitative tests engaged a total of 425 participants with sample sizes ranging from five to 230 participants. These studies included cisgender people and trans men, trans

[8] This ruling applied only in England and Wales. In Scotland, the Inner Court of Session concluded that the original instruction, which advised transgender people to report the sex with which they identified regardless of their legal status, was lawful.

[9] This ruling occurred during the census collection period. To determine the potential impact of this guidance change to mid-data collection on quality of the data, the ONS analyzed guidance page views and occurrences of duplicate response submissions. Its analysis found no evidence to suggest the change in guidance had any negative impact on the quality of the sex data (ONS 2021b).

women, non-binary, intersex people, and parents of trans children. The tests used various methods such as cognitive interviews, focus groups, and informal interviews to understand concepts about sex and gender; terminologies to adopt; and potential issues such as privacy, security, public acceptability, and translation of concepts in Welsh (see **Exhibit D.6**). These studies also aimed to understand the motivations and barriers for transgender people to take the census and answer the gender question. In addition, the ONS tested if the two-step approach to the sex and gender identity questions would capture the required information and if it would have any impact on the census as a whole. Another goal of these tests these was to ensure that the guidance provided for the sex and gender identity questions was informative and inclusive (ONS 2021a).

Exhibit D.6. Testing the gender identity question in Welsh

The ONS hired an external agency to conduct qualitative research and test the comprehension and acceptability of the gender identity question in Welsh. During these tests, it found that none of the participants identified as trans and the Welsh words for sex and gender were too similar, which created difficulties in designing the questions. However, the ONS did not add an explanation of gender to the questionnaire as it determined this did not affect the respondents' ability to answer the question correctly (ONS 2021a). The ONS presumed that people who identified with a gender different from their registered birth sex and opted to respond in Welsh were already familiar with both terms. This suggests that, at least in this context, respondents could understand and answer the question without additional guidance, highlighting the importance of considering linguistic and cultural factors in census design.

Quantitative tests. The five quantitative tests used large-scale multimodal surveys that replicated the census context and small-scale individual online omnibus surveys. These tests involved close to 60,000 respondents with sample sizes ranging from 3,000 to 31,665 respondents. The aim was to test response rates and dropouts after reading the gender question, the impact of asking variations of questions about sex and gender identity on response rates and data quality, identification of potential data quality issues, assessment of the acceptability of the gender question, and the impact of a proxy respondent and a "prefer not to say" option (ONS 2021a).

4. Implementing the More Gender-Inclusive Question in the Census and Other Population-Based Surveys

The 2021 Census in England and Wales included two questions on sex and gender (**Exhibit D.5**). In this section, we discuss the data collection of these questions and ongoing considerations and challenges.

Response rates. The gender identity question from the Census 2021 had a response rate of 94 percent. Because the question was voluntary, the ONS did not adjust for missing values. The ONS did, however, adjust for the student population to improve the estimation of students living at their term-time address, which slightly increased the proportion of "not answered" and decreased proportions of other categories. The adjustment should not affect the analysis of sexual orientation and gender identity topics, but caution is advised when interpreting data for 18- to 22-year-olds or full-time students (ONS 2023a).

Proxy responses. A proxy respondent completed about 30 percent of the census responses for each resident-level question (ONS 2023b). The ONS has acknowledged the ongoing challenge that using proxy respondents for the gender identity and sexual orientation questions poses for the accuracy and reliability of the data collected (ONS 2023a). This is because the proxy respondent might not have adequate knowledge of the participant's gender identity (or sexual orientation) or might be hesitant to provide truthful responses due to social desirability bias or fear of repercussions. The ONS has acknowledged but not yet resolved this issue.

> "As sexual orientation and gender identity were voluntary questions in the census, missing values on census responses were legitimate responses. So, (unlike with mandatory questions) we did not impute values to replace those missing on received responses. This means that these questions include a 'not answered' category in standard outputs. Any write-in responses that did not relate to the question were coded as if the question had not been answered."
>
> ONS (2023a)

Comparability to other UK countries. The ONS has partnered with the NRS to ensure the consistency and comparability of UK-wide statistics, as Scotland recently introduced a different gender identity question from that used in England and Wales in its 2022 census (ONS 2021a; Government Statistical Service 2019).[10] To maintain some comparability over time, the ONS initially decided to keep the sex question unchanged since the first census in 1801.

Although the ONS documents show learning from implementing the gender identity question in the census, the implications for the next round in 2031 are not yet clear. However, just like the consultations conducted for the previous censuses, the ONS could conduct another round of consultation for the 2031 census. For example, GenderGP, an online health and well-being clinic that supports transgender people, has drawn attention to the exclusion of trans youth from conversations around gender-affirming health care, the youth younger than 16 represent the very group not being asked the gender identity question (Castagnaro 2023). The future will show how the ONS plans to implement lessons learned from the 2021 data collection.

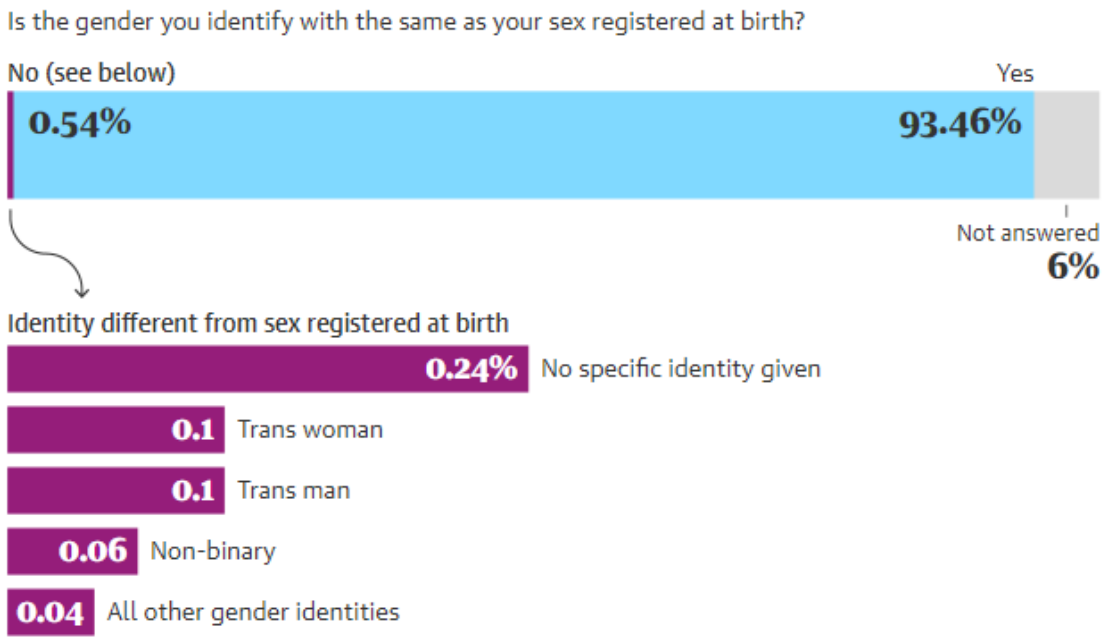
5. Analysis of More Inclusive Gender Data from the 2021 Census

The UK released Census 2021 data and reports publicly for the first time in January 2023, revealing that 262,000 people ages 16 years and over (0.5 percent of the population) identified their gender differently from their sex at birth (ONS 2023c; see **Exhibit D.7**). The first two reports provided figures on gender identity by country, area, local authorities, age, and sex (ONS 2023d; ONS 2023a). In addition, the ONS made these data accessible in various formats and at different geographical levels, though with reduced detail at lower levels to protect data confidentiality (ONS 2023d). The ONS plans to release future publications covering gender identity statistics by various

[10] After the sex question, the Scotland Census 2022 asked respondents are "Do you consider yourself to be trans, or have a trans history? This question is voluntary. Answer only if you are aged 16 or over. Trans is a term used to describe people whose gender is not the same as the sex they were registered at birth. Tick one box only. No. Yes, please describe your trans status (for example, non-binary, trans man, trans woman)."

demographics—including health and social determinants of health (SDOH) outcomes—which will enable an intersectional analysis of gender identity. The demographics planned for inclusion comprise ethnicity, religion, sexual orientation, general health, long-term conditions or illnesses, educational attainment, employment and labor market outcomes, family and household circumstances, and housing type. The ONS also proposes several classifications for the gender identity question to use for data analysis (ONS 2023e) (**Exhibit D.8**). Next, we discuss the citations and uses of these data to date.

Exhibit D.7. Gender identity data in England and Wales from Census 2021



Source: Booth and Goodier 2023.

Exhibit D.8. The ONS' proposed classifications for analysis of gender identity question

Eight-category classification	Seven-category classification	Four-category classification
Gender identity the same as sex registered at birth	Gender identity the same as sex registered at birth	Gender identity the same as sex registered at birth
Gender identity different from sex registered at birth but no specific identity given[a]	Gender identity different from sex registered at birth but no specific identity given	Gender identity different from sex registered at birth
Trans woman	Trans woman	
Trans man	Trans man	
Non-binary		
All other gender identities	All other gender identities	
Not answered	Not answered	Not answered
Does not apply	Does not apply	Does not apply

[a] Gender identity different from sex registered at birth but no specific identity given. These are people who responded negatively to the question "Is the gender you identify with the same as your sex registered at birth?" but did not provide any gender identity information in the open field (ONS 2023a).

Citation of ONS census gender identity questions in the media. The release of data on gender identity was highly anticipated, as evidenced by the attention it received in various media outlets and from numerous charities and LGBTQIA+ organizations (see **Exhibit D.9**).

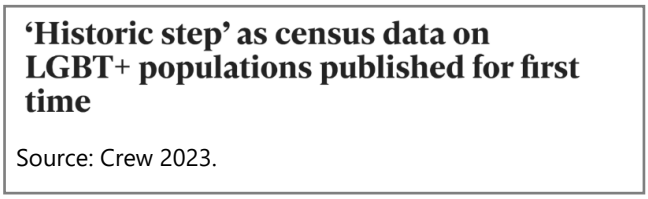
Exhibit D.9. Select media reports on the release of Census 2021 data on gender identity

England and Wales census counts trans and non-binary people for first time

Stonewall hails as 'historic step' results showing 262k people identify as gender different to sex at birth

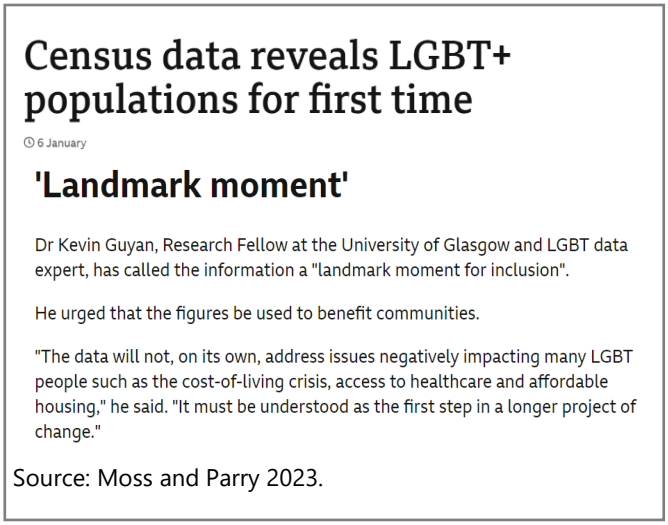
Campaigners said the groundbreaking new measures should be used to improve support for LGBTQ+ people at work, in education and including medical help with gender transitioning for which there are NHS waiting lists running into several years.

Source: Booth and Goodier 2023.



'Historic step' as census data on LGBT+ populations published for first time

Source: Crew 2023.



Census data reveals LGBT+ populations for first time

6 January

'Landmark moment'

Dr Kevin Guyan, Research Fellow at the University of Glasgow and LGBT data expert, has called the information a "landmark moment for inclusion".

He urged that the figures be used to benefit communities.

"The data will not, on its own, address issues negatively impacting many LGBT people such as the cost-of-living crisis, access to healthcare and affordable housing," he said. "It must be understood as the first step in a longer project of change."

Source: Moss and Parry 2023.

Analysis by nongovernment entities and potential postponement in use of the data. After analyzing the already published data, and by requesting additional information on proficiency in English by gender identity (ONS 2023f), researchers discovered there was one transgender person for every 67 Muslims. They also found non-native English speakers were five times more likely to identify as transgender than native English speakers. Moreover, they found some London boroughs had a greater proportion of transgender people compared to Brighton, which is considered the LGBTQIA+ capital of the UK. One hypothesis to explain this surprising phenomenon is that non-native speakers of English or people from certain regions of the world might not have comprehended the gender question and may have selected an inaccurate response, leading to an overestimation of the transgender population. The media has heavily relayed this message, putting pressure on both the ONS and the Office for Statistics Regulation (the ONS' watchdog) to act and address these concerns. In response, the ONS issued a press release on April 14, 2023, stating it had thoroughly tested the gender identity question to ensure proper understanding (ONS 2023g). However, the Office for Statistics Regulation has launched an investigation in collaboration with the ONS to further address these concerns (Humpherson 2023). In recent statements (ONS 2023h; Rourke 2023), the ONS confirmed it will conduct ongoing research to compare census gender identity data with other available sources. In addition, it is analyzing data patterns and other information obtained from the census to gain insights into how people responded to the gender identity question. The ONS suggests users might opt to postpone using the data for practical purposes until these reports are available.

6. Anticipated Health and SDOH Benefits of More Inclusive Gender Data in England and Wales

Improved health and SDOH outcomes for transgender and non-binary individuals

Incorporating gender-inclusive measures in the census for England and Wales could yield numerous benefits. For example, the ONS has notably identified a potential for better targeting of public service provision; "ONS research and consultation showed a clear need for information on sexual orientation, to support work on policy development and service provision and to allow local authorities to meet and monitor their requirements under the Equality Act 2010" (ONS 2021c), as well as meeting legal requirement related to gathering data on a protected characteristic of the population: "These requirements are strengthened by the need for information on those with the protected characteristic of gender reassignment as set out in the Equality Act 2010" (ONS 2020).

Analysis of the data to date quantified disparities in health outcomes between transgender and cisgender populations, underscoring the urgency of measuring these inequalities to enable policymakers and health authorities to address them (Romanelli et al. 2023). Transgender people report poorer health and more limitations due to illness or disability compared to cisgender people. These findings hold significant implications for policymakers to put forward policies and interventions to address these findings. However, policymakers will want to consider identities that intersect with the LGBTQIA+ identity when developing interventions and policies. For example, LGBTQIA+ people are more likely to belong to ethnic minority groups, potentially accentuating or attenuating disparities. Moreover, challenges in counting LGBTQIA+ people, combined with concerns about coming out and misclassification, might have led to an underestimation of inequalities. Romanelli et al. (2023) recommended using the data on gender identity to pinpoint areas with LGBTQIA+ disparities, understand their causes, generate hypotheses for future research, and advocate for increased funding. Collaboration between the ONS and government bodies could enhance the utility of these data for addressing observed inequalities.

7. Key Learnings from England and Wales that Are Relevant to the U.S.

We conclude with a summary of the key learnings from the ONS' experience designing and implementing a more gender-inclusive measure in the 2021 Census that are relevant to the U.S. context.

Use a proactive approach with transparency backed by comprehensive research to mitigate polarization and create broad support. In the backdrop of polarized discussions on gender identity within UK politics and the media, which have stirred a mix of supportive and conflicting sentiments across the population, the ONS has prioritized transparency and demonstrated a commitment to exhaustive research and testing. By disseminating numerous reports, detailed methodological guides, and comprehensive information regarding motivations, methodologies, and testing plans for the new gender identity question, the ONS has helped promote a more balanced and informed public discourse on the matter.

Conduct multilingual and multicultural testing of the gender identity questions. The UK's multicultural society, wherein the ONS oversees the census for both England and Wales, underscores the

complexities of deploying the census in multilingual and multicultural environments. It specifically highlights the paramount importance of rigorous and all-encompassing testing, while also considering the multitude of gender identities, cultural heritages, and linguistic diversities in the development and testing phases. This process included both quantitative and qualitative testing; rigorously assessing response rates, question variations, response options, data quality, and acceptability; and other aspects such as clarity, inclusivity, and translations in Welsh. These examples underscore the ONS' dedication to ensuring the effectiveness of its data collection efforts. The importance of comprehensive testing cannot be overstated, as it is vital for evaluating the acceptability of different wording of questions and response mechanisms for the question on gender identity.

Consider how to balance open access to the data and maintaining confidentiality at the beginning of the process to minimize data misuse. To build upon this successful approach, it is advisable to implement meticulous strategies for reporting and presenting data, including the prudent use of methods such as small population suppression and demographic grouping to ensure sensitive information remains protected. By adhering to data protection during the data collection process and afterward, data reporting and presentation can be informative and uphold the highest standards of confidentiality and privacy, essential for making informed decisions and accountability of the census authorities.

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